PROCEEDINGS

OF THE

Board of Trustees

OF THE

Public School Teachers' Pension and Retirement Fund of Chicago

Regular Meeting – Official Report Thursday, February 21, 2019

A regular meeting of the Board of Trustees of the Public School Teachers' Pension and Retirement Fund of Chicago was held Thursday, February 21, 2019.

The President, Mr. Jeffery Blackwell, called the meeting to order at 9:33 a.m.

PUBLIC PARTICIPATION

Presentation by Jesse Sharkey

Mr. Jesse Sharkey, President of the Chicago Teachers Union, expressed his appreciation for the work of the Board of Trustees. He stated that preserving the pension system for the members of CTU is of top priority to their organization. Mr. Sharkey also stated that CTU will continue to advocate for teachers and retirees.

ROLL CALL

Members present: Mr. Jeffery Blackwell, Mr. Robert F. Bures, Mr. James Cavallero, Ms. Tina Padilla, Ms. Jacquelyn Price Ward, Mr. Gregory Redfeairn, Ms. Mary Sharon Reilly, Ms. Maria J. Rodriguez, Mr. Jerry Travlos, Ms. Gail D. Ward – 10

Members absent: Ms. Gervaise Clay, Mr. Mark F. Furlong – 2

Ms. Clay arrived to the meeting during the Report on Items to Move to the Omnibus.

Also in attendance were Mr. Charles A. Burbridge (*Executive Director*), Ms. Mary Cavallaro (*Deputy Executive Director*), Mr. John F. Schomberg (*Chief Legal Officer*), Ms. Adriane McCoy (*Internal Audit Director*), Ms. Angela Miller-May (*Chief Investment Officer*), Mr. Joseph Burns, of Jacobs, Burns, Orlove and Hernandez (*Board Counsel*), and various observers and staff members.

CONSENT AGENDA

Motion to Approve Consent Agenda, Approved

The Board moved to approve the consent agenda which includes the approval of the minutes of the Regular Board Meeting on January 17, 2019, the Public Participation portion of the December 6, 2018, Finance and Audit Committee meeting Report, and the following trustee conference requests:

Ms. Clay, Mr. Cavallero, Ms. Price Ward, and Ms. Padilla requested approval to attend the American Federation of Teachers Trustee Council Meeting on March 6, 2019, in Washington, DC.

Mr. Blackwell requested approval to attend Opal Investment Education Symposium, February 27-March 1, 2019, in New Orleans, LA.

Ms. Price Ward and Mr. Redfeairn requested approval to attend Bernstein Litowitz Berger & Grossman, Protecting Shareholders Rights Conference, April 10-13, 2019, in New Orleans, LA.

Mr. Redfeairn requested approval to attend International Foundation Advanced Trustees and Administrators Institute, June 24-26, 2019, in San Francisco, CA.

Ms. Padilla, Ms. Reilly, and Mr. Travlos requested approval to attend NASP, June 24-26, 2019, in Baltimore, MD.

Ms. Reilly requested approval to attend Institutional Investor Private Equity Summit and Public Funds Roundtable, April 23-27, 2019, in Los Angeles, CA.

Ms. Price Ward requested approval to attend NCTR 19th Annual Trustee Workshop, July 21-24, 2019, in Berkeley, CA.

Ms. Padilla, Ms. Reilly, and Ms. Price Ward requested approval to attend the NCPERS Trustee Educational Seminar, May 18-19, 2019, in Austin, TX.

The motion passed by the following vote:

Ayes: Mr. Blackwell, Mr. Bures, Mr. Cavallero, Ms. Padilla, Ms. Price Ward, Mr. Redfeairn, Ms. Reilly, Mr. Travlos, Ms. Ward – 9

Abstentions: Ms. Rodriguez – 1

ITEMS TO MOVE TO THE OMNIBUS

Chairperson Padilla moved the Report of the Committee on Investments to the Omnibus.

Chairperson Bures moved the Report of the Committee on Pension Laws and Administrative Rules to the Omnibus.

Chairperson Price Ward moved the Report of the Committee on Communications to the Omnibus.

Chairperson Reilly moved the Report of the Committee on Personnel to the Omnibus.

Chairperson Redfeairn moved the Report of the Committee on Finance and Audit to the Omnibus.

Motion to Approve the Omnibus, Approved

Ms. Reilly made a motion, seconded by Mr. Redfeairn, to approve the omnibus. The motion passed by the following vote:

Ayes: Mr. Blackwell, Mr. Bures, Mr. Cavallero, Ms. Padilla, Ms. Price Ward, Mr. Redfeairn, Ms. Reilly, Ms. Rodriguez, Mr. Travlos, Ms. Ward – 10

Abstentions: Ms. Clay - 1

VOTE AGENDA

January 24, 2019, Finance and Audit Committee Meeting Report and Recommendations

Ms. Mary Cavallaro, Deputy Executive Director, and Ms. Alise White, Chief Financial Officer, discussed the recommended remediation plan for the FY 2018 AUP. They stated that staff will continue to meet with key individuals from CPS to review AUP variances and will establish a remediation timeline for FY 2019. Ms. Cavallaro and Ms. White stated that additional work meetings with CPS will be scheduled, as necessary, to complete remediation for FY 2018 variances. The Board discussed a plan to get correct data from CPS and the issues regarding CPS/employee settlements.

Recommendation Regarding Moving Everest Delinquency Waiver Request

Moving Everest is requesting a waiver for pay period end date 8/31/18 in the amount of \$604.91. The employer is stating that the reason for untimely submission is due to the time it took CTPF staff to respond to ERS questions.

Staff recommends denying the waiver request and billing Moving Everest. There is not sufficient evidence to waive the late fee for the pay period end date 8/31/18. The employer did not reach out to CTPF on 8/10/18 in regard to a different pay period end date (7/15/18). There were no CTPF system impediments to Moving Everest being able to submit timely payroll records and pension contributions. Moving Everest has historically submitted untimely payroll during FY 2016, 2017, 2018 and 2019.

Recommendation Regarding CTU Delinquency Waiver Request

Chicago Teachers Union ("CTU") submitted a formal waiver request for pay period end dates 6/22/18 through 8/31/18 in the amount of \$37,381.18. CTU stated that payroll submissions were submitted untimely due to employee turnover that resulted in lack of internal CTU communication regarding the CTU office's responsibilities. The employer also stated that there was confusion with setting up the payroll calendar and salaries for the year which resulted in multiple emails to CTPF staff.

Staff recommends denying the waiver request and billing CTU for late payroll submissions. The employer did display a good faith effort on and after 8/29/18, however CTU did not submit pension contributions within the conditional grace period. There were no CTPF system impediments to CTU being able to submit timely payroll records and pension contributions. CTU has historically submitted untimely payroll records and pension contributions during FY 2017 and FY 2019.

Recommendation Regarding Chicago Charter School Foundation ("CICS") Waiver Request CICS has submitted a formal waiver request for pay period end dates 5/23/18 through 9/23/18 in the amount of \$14,468.76. CICS is stating that the reason for untimely submission is due to a brief training period related to the new ERS website. The employer states multiple errors occurred which prevented the employer from submitting payroll records to CTPF. According to the employer, CTPF staff did not respond to questions in a timely manner which resulted in late submission.

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Staff recommends denying the waiver request and billing CICS. Neither Matthew Battaglia (previous Pension Officer), Aleks Lazarevski (the current Pension Officer), nor anyone else from CICS reached out to CTPF in regard to payroll submissions. There were no CTPF system impediments to CICS being able to submit timely payroll records and pension contributions. The employer has historically submitted untimely payroll during FY 2018.

Motion to Deny Moving Everest Waiver Request, Approved

Mr. Redfeairn made a motion, seconded by Ms. Rodriguez, to deny Moving Everest Charter School waiver request. The motion passed unanimously.

Motion to Deny CTU Waiver Request, Approved

Mr. Redfeairn made a motion, seconded by Ms. Rodriguez, to deny CTU Waiver request. The motion passed by the following vote:

Ayes: Mr. Blackwell, Mr. Bures, Ms. Padilla, Mr. Redfeairn, Ms. Reilly, Ms. Rodriguez, Mr. Travlos, Ms. Ward – 8

Nays: Ms. Clay - 1

Abstentions: Mr. Cavallero, Ms. Price Ward – 2

Motion to Deny Chicago School Foundation, Approved

Mr. Redfeairn made a motion, seconded by Ms. Padilla, to deny Chicago Charter School Foundation waiver request. The motion passed unanimously.

Employer Audit and Staffing Costs

Mr. Cavallaro and Ms. Rosemary Ihejirika, Chief Benefits Officer, reported on the pay bands for the proposed Employer Audit personnel. Ms. Ihejirika stated that the Compliance department is looking to hire a Data Audit Specialist, Employer Audit Analyst, and Employer Audit Manager. Ms. Ihejirika stated that the purpose of additional staff is to help with ongoing audits of Chicago Public Schools and Charter Schools.

Ms. Clay requested details regarding past audits of Charter Schools. Discussion ensued regarding the hiring of additional staff for auditing purposes and findings from past audits.

Motion to Table Approval of Employer Audit Staff, Failed

Ms. Clay made a motion, seconded by Ms. Rodriguez, to table the approval of 3 additional audit personnel. The motion failed by the following vote:

Ayes: Ms Clay, Mr. Cavallero, Ms. Padilla, Ms. Rodriguez – 4

Nays: Mr. Blackwell, Mr. Bures, Ms. Price Ward, Mr. Redfeairn, Ms. Reilly, Mr. Travlos, Ms. Ward – 7

Ms. Clay expressed her concern and dissatisfaction with the Board in regard to not giving her the opportunity to receive more information before voting. Discussion ensued regarding past Board actions and the attendance of Trustees at Committee meetings.

Motion to Hire Employer Audit Personnel, Approved

Mr. Redfeairn made a motion, seconded by Ms. Reilly, to approve the hiring of 3 Employer Audit staff as outlined in the proposed staff plan. The motion passed by the following roll call vote:

Ayes: Mr. Blackwell, Mr. Bures, Mr. Cavallero, Ms. Price Ward, Mr. Redfeairn, Ms. Reilly, Mr. Travlos, Ms. Ward – 8

Nays: Ms. Padilla – 1

Abstentions: Ms. Rodriguez – 1

Ms. Clay did not vote on the motion.

Chairperson Redfeairn moved the Report of Finance & Audit to the Omnibus.

Motion to Change Order of Agenda, Approved

Ms. Reilly made a motion, seconded by Mr. Travlos, to change the order of business to allow Investment staff and other guest to present. The motion passed unanimously.

REPORT OF THE INVESTMENT COMMITTEE

Callan Associates

Ms. Jen Mende, of Callan Associates, Ms. Angela Miller-May, CTPF Chief Investments Officer, and Mr. John Freihammer, CTPF Portfolio Manager, reviewed the Infrastructure performance report ending September 30, 2018. Ms. Mende stated that the Fund has a target of 2% to be invested in infrastructure and a range of 0% to 4%. Ms. Mende stated that Macquarie represents 40% of current infrastructure exposure considering funded and unfunded commitments for CTPF, and that this concentration will decline as the existing funds exit their investments. Ms. Mende also presented the rationale for Brookfield Infrastructure Fund IV investment. She stated that both Macquarie investments were made in 2008, and based on manager guidance, it is likely CTPF will receive significant distributions in the next two to three years from those funds. Ms. Miller-May reported that the 2019 pacing study recommendation is to invest up to \$50M to private infrastructure and to maintain exposure to the infrastructure investment market. Callan and staff's recommendation is to commit \$25M to Brookfield Infrastructure Fund IV. They addressed questions raised by the Board.

Manager Due Diligence Presentations

Representatives from Brookfield and Channing Capital Management presented to the Board. The managers reviewed organization, strategy, performance, firm diversity and fees. The managers addressed questions raised by the Trustees.

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Motion to Accept Callan and Staff Recommendation, Approved

Ms. Padilla made a motion, seconded by Ms. Reilly, to approve Callan and staff recommendation to Re-Up \$25M to Brookfield, subject to contract negotiations. The motion passed by the following roll call vote:

Ayes: Mr. Blackwell, Mr. Bures, Mr. Cavallero, Ms. Padilla, Ms. Price Ward, Mr. Redfeairn, Ms. Reilly, Ms. Rodriguez, Mr. Travlos, Ms. Ward – 10

Abstentions: Ms. Clay - 1

Watch List Status Report and Recommendation

Ms. Brianne Weymouth, of Callan Associates, reviewed the Fund's Watch List. She reported that Channing was put on the Watch List due to the succession plan and short term performance struggle. She stated that the recommendation of Callan is to keep Channing on watch and continue to monitor their performance. Ms. Weymouth addressed questions raised by the Board.

Lease Status Update & Architectural Services

Mr. Robert Griffin, CBRE, Mr. Charles Burbridge, Executive Director, and Ms. Gail Davis, Manager of Administrative Services, reported on the architectural services contract. Mr. Burbridge stated that the Board approved expenditures of up to \$110,000 for architectural services by PBD for space needs in conjunction with CTPF's office relocation. This authorized spend was based on rentable square footage projected at 30,000 square feet at a cost of \$3.67 per square foot and the understanding based on initial discussion with PBD, that any PBD reimbursable expenses were incorporated into this \$110,000. He noted that the first phase of the architectural services, which included test fits of the space and projections of additional staffing needs over the life of the lease, the anticipated final RSF will be 31,817 square feet. At an agreed-upon cost of \$3.67 per square foot, this increases the cost of the PBD contract, prior to reimbursable to \$116.768.39. This increase in RSF means that there will be an increase in tenant improvements allowance, which is based on square feet, offered as part of space negotiations with the 425 W. Financial building owners. CTPF is requesting approval of architectural services contract to include expenditures of up \$125,000, based on a total RSF of 31,817 square feet, and up to \$7,500 of architectural reimbursable expenses.

Motion to Approve Amendment to Architectural Services Contract, Approved

Ms. Price Ward made a motion, seconded by Ms. Reilly, to approve the amendment to architectural services contract. The motion passed by the following roll call vote:

Ayes: Mr. Blackwell, Mr. Bures, Mr. Cavallero, Ms. Price Ward, Mr. Redfeairn, Ms. Reilly, Ms. Mr. Travlos, Ms. Ward – 8

Nays: Ms. Padilla, Ms. Rodriguez – 2

Abstentions: Ms. Clay -1

RFP for General Contractor

Mr. Burbridge reported on the lease agreement at 425 Financial Place. He stated that as part of CBRE services as the Fund's real estate broker, CBRE will conduct an RFP to assist Fund staff in identifying general contractor candidates to be interviewed and selected by CTPF to build out the space in its new location. The RFP will be conducted as part of the services provided under contract with CBRE, and there is no cost to the Fund for the RFP services. The search will include criteria based on the qualitative needs outlined by the Fund. Mr. Burbridge addressed questions raised by the Board.

Motion to Approve RFP for General Contractor, Approved

Ms. Reilly made a motion, seconded by Mr. Travlos, to approve to authorize CBRE to conduct and RFP on behalf of the Fund for a general contractor. The motion passed by the following vote:

Ayes: Mr. Blackwell, Mr. Bures, Mr. Cavallero, Ms. Price Ward, Mr. Redfeairn, Ms. Reilly, Ms. Mr. Travlos, Ms. Ward – 8

Nays: Ms. Padilla, Ms. Rodriguez – 2

Abstentions: Ms. Clay -1

Security Information and Event Management Solution

Ms. Vandana Vohra, Chief Technology Officer, reviewed the proposed plan for Security Information and Event Management, and the RFP for Managed Security Service Provider. Ms. Vohra stated that this solution and service will better integrate the Fund's upgraded IT infrastructure and Cloud-based migrations while offering improved monitoring, alerting and reporting capabilities. She stated that CTPF staff recommends Rapid7 for their broad technology portfolio, built in monitoring services, robust log collector, behavior analytics and custom dashboard capabilities. Ms. Vohra addressed questions raised by the Board.

Motion to Hire Rapid7, Approved

Mr. Redfeairn made a motion, seconded by Mr. Cavallero, to hire Rapid7 as outlined in the proposed plan for security information and event management services. The motion passed by the following roll call vote:

Ayes: Mr. Blackwell, Mr. Cavallero, Ms. Clay, Ms. Price Ward, Mr. Redfeairn, Ms. Reilly, Mr. Travlos, Ms. Ward – 8.

Abstentions: Ms. Rodriguez – 1.

Election Agent Vendor

Ms, Tracey Schroeder, Director of Communications, reported on the Election Agent Vendor selection. Ms. Schroeder stated that in August 2018, the Fund issued an RFP to solicit companies to manage the annual CTPF Board of Trustees Elections. An election RFP evaluations committee was selected and comprised of staff from IT, Communications, Benefits Legal, Administrative Services, and Internal Audit to evaluate the needs and specifications of the election agent. The Election RFP Evaluation Committee recommends Election America as the CTPF Board of Trustees Elections Agent for a period of three years. Ms. Schroeder addressed questions raised by the Board.

Motion to Hire Election America, Approved

Ms. Rodriguez made a motion, seconded by Ms. Price Ward, to accept staff's recommendation to hire Election America as the Board of Trustees Elections agent. The motion passed by the following roll call vote:

Ayes: Mr. Blackwell, Ms. Price Ward, Ms. Reilly, Ms. Rodriguez, Ms. Ward – 5

Nays: Mr. Cavallero, Ms. Clay, Mr. Redfeairn, Mr. Travlos – 4

Ms. Price Ward left the meeting.

Motion to go into Executive Session, Approved

Ms. Reilly made a motion, seconded by Ms. Ward, to go into Executive Session for the purpose of discussing personnel and internal control matters. The motion passed unanimously.

The Executive Session lasted from 4:40 P.M to 5:22 P.M.

Motion to go into Open Session, Approved

Mr. Redfeairn made a motion, seconded by Ms. Rodriguez, to go into Open Session. The motion passed unanimously.

Motion to Adjourn, Approved

Ms. Reilly made a motion, seconded by Ms. Rodriguez, to adjourn the meeting. The meeting adjourned at 5:24 P.M.

Respectfully submitted,

Jacqueline Price Ward Recording Secretary

PROCEEDINGS

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OF THE

Public School Teachers' Pension and Retirement Fund of Chicago

Executive Session – Official Report Thursday, February 21, 2019

An Executive Session of the Board of Trustees of the Public School Teachers' Pension and Retirement Fund of Chicago was held Thursday, February 21, 2019.

The President, Mr. Jeffery Blackwell, called the meeting to order at 1:19 p.m.

ROLL CALL

Members present: Mr. Jeffery Blackwell, Mr. Robert F. Bures, Mr. James Cavallero, Ms. Gervaise Clay, Ms. Tina Padilla, Mr. Gregory Redfeairn, Ms. Mary Sharon Reilly, Ms. Maria J. Rodriguez, Ms. Jacquelyn Price Ward, Ms. Gail D. Ward—11

Members absent: Mr. Mark Furlong—1

Also in attendance for portions of the Executive Session (with Ms. Hernandez attending in its entirety) were Mr. Charles A. Burbridge (*Executive Director*), Ms. Mary Cavallaro (*Deputy Executive Director*), Mr. John F. Schomberg (Chief Legal Officer), Ms. Adriane McCoy (*Internal Audit Director*), Mr. Daniel J. Hurtado (*Associate General Counsel*) and Ms. Marisel Hernandez of Jacobs, Burns, Orlove and Hernandez (*Board Counsel*).

Discussion ensued regarding litigation/return to work matters, personnel matters, internal control matters, and a non-duty disability application. No action was taken.

Mr. Bures left during Executive Session.

There being no further business, the Executive Session adjourned at 3:55 p.m.

Respectfully submitted,

Jacqueline Price Ward Recording Secretary

PROCEEDINGS

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Executive Session – Official Report Thursday, February 21, 2019

An Executive Session of the Board of Trustees of the Public School Teachers' Pension and Retirement Fund of Chicago was held Thursday, February 21, 2019.

The President, Mr. Jeffery Blackwell, called the meeting to order at 4:40 p.m.

ROLL CALL

Members present: Mr. Jeffery Blackwell, Mr. James Cavallero, Ms. Gervaise Clay, Mr. Gregory Redfeairn, Ms. Mary Sharon Reilly, Ms. Maria J. Rodriguez, Mr. Travlos, Ms. Gail D. Ward—8

Members absent: Mr. Bures, Ms. Padilla, Ms. Price Ward, Mr. Mark Furlong—5

Also in attendance for portions of the Executive Session (with Ms. Hernandez attending in its entirety) were Mr. Charles A. Burbridge (Executive Director), Ms. Mary Cavallaro (Deputy Executive Director), Mr. John F. Schomberg (Chief Legal Officer), Ms. Adriane McCoy (Internal Audit Director), Mr. Daniel J. Hurtado (Associate General Counsel) and Ms. Marisel Hernandez of Jacobs, Burns, Orlove and Hernandez (Board Counsel).

Discussion ensued regarding personnel matters and internal control matters. No action was taken.

Mr. Bures left during Executive Session.

There being no further business, the Executive Session adjourned at 5:22 p.m.

Respectfully submitted,

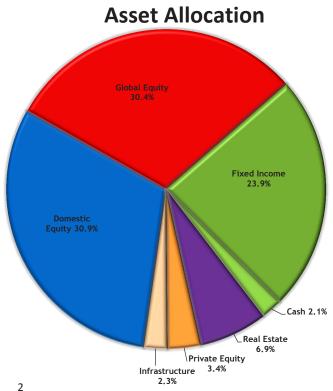
Jacqueline Price Ward Recording Secretary

Asset Allocation Summary

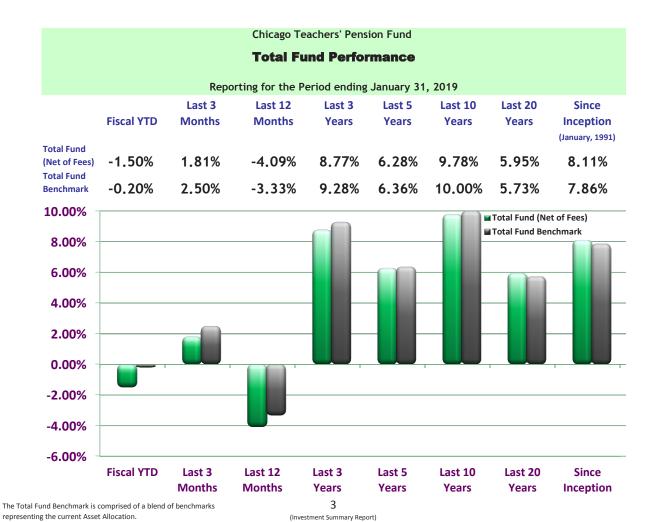
(in millions of dollars)
Reporting for the Period ending January 31, 2019

	\$	Millions	% of Fund
Domestic Equity	\$	3,171	30.9%
Global Equity	\$	3,117	30.4%
Fixed Income	\$	2,446	23.9%
Cash	\$	217	2.1%
Real Estate	\$	711	6.9%
Private Equity	\$	345	3.4%
Infrastructure	\$	240	2.3%
Grand Total	Ś	10.247	100.0%

	Allocation Actual	Policy Target	Difference	Allowable Range
Domestic Equity	30.9%	30.5%	0.45%	+/- 2
Global Equity	30.4%	30.5%	-0.08%	+/- 5
Fixed Income & Cash	26.0%	23.0%	2.99%	+/- 5
Real Estate	6.9%	9.0%	-2.06%	+/- 2
Private Equity	3.4%	5.0%	-1.63%	+/- 2
Infrastructure	2.3%	2.0%	0.34%	+/- 2
•	100.0%	100.0%	-	



Note: Percentages may not add up due to rounding This report is unaudited and intended for informational purposes only.



Investment Manager Performance Report Asset Class Summary - Gross

Reporting for the Period ending January 31, 2019

	Fiscal YTD Ending	3 Months Ending	12 Months Ending	3 Years Ending	5 Years Ending	10 Years Ending	Since	Inception
	<u>01/31/19</u>	<u>01/31/19</u>	<u>01/31/19</u>	<u>01/31/19</u>	<u>01/31/19</u>	01/31/19	Inception	<u>Date</u>
DOMESTIC EQUITY								
Gross of Fees	-1.48%	0.55%	-2.83%	13.83%	9.97%	15.00%	10.14%	4/1990
Domestic Equity Benchmark	-0.32%	0.45%	-2.26%	14.19%	10.41%	15.14%	9.95%	
GLOBAL EQUITY								
Gross of Fees	-6.54%	2.12%	-13.70%	8.61%	3.65%	9.75%	6.90%	12/1995
Global Equity Benchmark	-4.81%	3.46%	-13.04%	9.47%	3.04%	8.31%	4.71%	
FIXED INCOME								
Gross of Fees	2.84%	3.69%	1.82%	2.77%	2.86%	4.65%	5.95%	1/1991
Fixed Income Benchmark	2.73%	3.53%	2.25%	1.95%	2.44%	3.68%	5.76%	
REAL ESTATE								
Gross of Fees	4.75%	1.83%	9.95%	8.63%	11.14%	5.94%	7.82%	1/2002
NFI-ODCE Value Weight Net	3.94%	1.52%	7.20%	7.22%	9.35%	6.59%	7.13%	
PRIVATE EQUITY								
Gross of Fees	6.59%	2.68%	13.47%	12.66%	13.47%	10.25%	9.18%	1/2002
INFRASTRUCTURE								
Gross of Fees	2.11%	1.86%	7.47%	10.22%	6.14%	6.88%	6.76%	11/2008
Infrastructure Benchmark	3.75%	6.25%	2.80%	6.02%	6.81%	7.40%	7.42%	117 2000

Mercer provided Gross Return data 1990-2010 and Net Return data 2002-2010. Therefore, account Gross and Net Return inception dates may differ. Callan provided data 2010 to present.

Chicago Teachers' Pension Fund Investment Manager Performance Report Domestic Equity - Gross

Reporting for the Period ending January 31, 2019

	Fiscal YTD Ending	3 Months Ending	12 Months Ending	3 Years Ending	5 Years Ending	10 Years Ending	Since	Inception
	01/31/19	01/31/19	01/31/19	01/31/19	01/31/19	01/31/19	Inception	<u>Date</u>
DOMESTIC EQUITY								4/1990
Gross of Fees	-1.48%	0.55%	-2.83%	13.83%	9.97%	15.00%	10.14%	
Domestic Equity Benchmark	-0.32%	0.45%	-2.26%	14.19%	10.41%	15.14%	9.95%	
NTGI 500 Index LCC								4/1990
Gross of Fees	0.03%	-0.30%	-2.90%	13.86%	10.85%	14.96%	9.67%	
S&P 500 Index	0.61%	0.26%	-2.31%	14.02%	10.96%	15.00%	9.75%	
Rhumbline Rsl 1000 LCC ^M								6/2007
Gross of Fees	0.32%	0.51%	-2.19%	14.04%	10.58%	15.18%	7.38%	
Russell 1000 Index	0.33%	0.51%	-2.17%	14.14%	10.68%	15.17%	7.31%	
Rhumbline Rsl 1000 LCG ^M								9/2017
Gross of Fees	0.10%	0.67%	0.34%	N/A	N/A	N/A	11.59%	
Russell 1000 Growth Index	0.08%	0.68%	0.24%	16.60%	12.97%	16.86%	11.62%	
Zevenbergen US ACE ^M								10/1992
Gross of Fees	-5.18%	2.86%	5.43%	22.24%	11.57%	18.57%	11.35%	
Russell 3000 Growth Index	-0.54%	0.63%	0.03%	16.51%	12.57%	16.77%	9.06%	
Channing US ACE ^{M2}								7/2009
Gross of Fees	-4.69%	3.37%	-8.60%	10.97%	7.23%	N/A	13.36%	
Russell 3000 Value Index	-0.11%	0.26%	-4.76%	11.79%	8.20%	13.39%	12.90%	

M=Minority Manager

(Domestic Equity continued on next page)

Mercer provided Gross Return data 1990-2010 and Net Return data 2002-2010. Therefore, account Gross and Net Return inception dates may differ. Callan provided data 2010 to present.

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Chicago Teachers' Pension Fund Investment Manager Performance Report Domestic Equity - Gross

Reporting for the Period ending January 31, 2019

	Fiscal YTD Ending	3 Months Ending	12 Months Ending	3 Years Ending	5 Years Ending	10 Years Ending	Since	Inception
	01/31/19	01/31/19	01/31/19	01/31/19	01/31/19	01/31/19	Inception	<u>Date</u>
DOMESTIC EQUITY								4/1990
BMO Global-Harris LCV ³								7/1999
Gross of Fees	-1.42%	0.08%	-7.37%	12.10%	9.01%	13.73%	7.34%	
Harris Benchmark	0.57%	0.34%	-4.81%	11.62%	8.33%	13.39%	5.02%	
NTGI Structured SCC								1/1991
Gross of Fees	-6.79%	-0.07%	-2.38%	14.47%	8.25%	15.93%	12.03%	
Russell 2000 Index	-8.05%	-0.41%	-3.52%	14.71%	7.26%	14.52%	10.55%	
BMO Disciplined SCG								7/2018
Net of Fees	N/A	-0.51%	N/A	N/A	N/A	N/A	-9.20%	
Russell 2000 Growth Index	-7.78%	0.06%	-2.63%	15.55%	7.83%	15.68%	-9.34%	
Conestoga SCG								7/2018
Net of Fees	N/A	-1.11%	N/A	N/A	N/A	N/A	-6.97%	
Russell 2000 Growth Index	-7.78%	0.06%	-2.63%	15.55%	7.83%	15.68%	-9.34%	
Phocas SCV								7/2016
Gross of Fees	-10.70%	-1.33%	-9.01%	N/A	N/A	N/A	7.76%	
Russell 2000 Value Index	-8.32%	-0.90%	-4.51%	13.76%	6.62%	13.28%	10.51%	

²Channing US ACE* - As of October, 2011, Channing's mandate was changed from Mid Cap Value (Inception 6/2009) to All Cap Value. Channing Benchmark reflects Russell Mid Cap Value Index through 9/30/11 and Russell 3000 Value Index thereafter.

Mercer provided Gross Return data 1990-2010 and Net Return data 2002-2010. Therefore, account Gross and Net Return inception dates may differ. Callan provided data 2010 to present.

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 $^{^3\}text{BMO}\xspace's$ Benchmark reflects S&P 500 through 12/31/02 and Russell 1000 Value thereafter.

[&]quot;=Minority Manager

Investment Manager Performance Report Global Equity - Gross

Reporting for the Period ending January 31, 2019

	Fiscal YTD Ending	3 Months Ending	12 Months Ending	3 Years Ending	5 Years Ending	10 Years Ending	Since	Inception
	01/31/19	01/31/19	01/31/19	01/31/19	01/31/19	01/31/19	Inception	<u>Date</u>
GLOBAL EQUITY								1/1996
Gross of Fees	-6.54%	2.12%	-13.70%	8.61%	3.65%	9.75%	6.90%	
Global Equity Benchmark	-4.81%	3.46%	-13.04%	9.47%	3.04%	8.31%	4.71%	
Ariel EAFE ILCV ^M								7/2016
Gross of Fees	-1.17%	2.83%	-7.40%	N/A	N/A	N/A	5.73%	
MSCI EAFE	-5.53%	1.27%	-12.51%	7.74%	2.66%	8.11%	7.79%	
Earnest Partners EME ^M								3/2013
Gross of Fees	1.28%	8.50%	-13.93%	14.79%	6.21%	N/A	N/A	
MSCI Emerging Markets Index	-0.23%	10.32%	-13.90%	15.32%	5.15%	10.03%	2.49%	
Earnest Partners ILCE ^M								4/2007
Gross of Fees	-5.48%	1.96%	-12.87%	12.07%	4.81%	11.52%	5.28%	
MSCI ACWI ex US Index	-4.10%	3.66%	-12.58%	9.59%	3.11%	8.35%	1.87%	

(Global Equity continued on next page)

Mercer provided Gross Return data 1990-2010 and Net Return data 2002-2010. Therefore, account Gross and Net Return inception dates may differ. Callan provided data 2010 to present.

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M=Minority Manager

Investment Manager Performance Report Global Equity - Gross

Reporting for the Period ending January 31, 2019

	•	•		,	*			
	Fiscal YTD Ending	3 Months Ending	12 Months Ending	3 Years Ending	5 Years Ending	10 Years Ending	Since	Inception
	01/31/19	01/31/19	01/31/19	01/31/19	01/31/19	01/31/19	Inception	<u>Date</u>
GLOBAL EQUITY								1/1996
Lazard ILCE ⁴								1/2001
Gross of Fees	-3.82%	3.02%	-11.71%	7.25%	3.50%	9.27%	5.67%	
Lazard Benchmark	-4.10%	3.66%	-12.51%	9.59%	3.11%	8.35%	4.36%	
Morgan Stanley ILCE								4/1995
Gross of Fees	-7.10%	0.39%	-11.71%	6.45%	3.10%	8.38%	8.49%	
MSCI EAFE Index	-5.53%	1.27%	-12.51%	7.74%	2.66%	8.11%	4.73%	
Leading Edge IE MOM ^M								4/2010
Gross of Fees	-5.56%	3.23%	-12.34%	10.39%	3.96%	N/A	5.52%	
MSCI ACWI ex US Index	-4.10%	3.66%	-12.58%	9.59%	3.11%	8.35%	4.01%	
DFA ISCV ⁵								((2012
								6/2012
Gross of Fees	-12.23%	-2.06%	-20.51%	7.31%	2.80%	N/A	9.69%	
MSCI ACWI ex US Small Cap	-9.83%	0.53%	-15.08%	9.56%	4.30%	11.62%	9.15%	

 $^{^4}$ Lazard ILCE Benchmark reflects the MSCI EAFE Index through 6/30/02 and MSCI ACWI ex-US Index thereafter.

(Global Equity continued on next page)

Mercer provided Gross Return data 1990-2010 and Net Return data 2002-2010. Therefore, account Gross and Net Return inception dates may differ. Callan provided data 2010 to present.

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 $^{^5\}text{DFA}$ transitioned from Domestic Small Cap mandate to International Small Cap mandate in May, 2012.

M=Minority Manager

Investment Manager Performance Report Global Equity - Gross

Reporting for the Period ending January 31, 2019

	Fiscal YTD	3 Months	12 Months	3 Years	5 Years	10 Years		
	Ending	Ending	Ending	Ending	Ending	Ending	Since	Inception
	01/31/19	01/31/19	01/31/19	01/31/19	01/31/19	01/31/19	Inception	<u>Date</u>
GLOBAL EQUITY								1/1996
Strategic Global EAFE								7/2016
Gross of Fees	-4.62%	2.99%	-11.70%	N/A	N/A	N/A	7.88%	
MSCI EAFE Index	-5.53%	1.27%	-12.51%	7.74%	2.66%	8.11%	7.79%	
William Blair ILACG								2/2010
Gross of Fees	-9.39%	1.67%	-15.04%	7.82%	3.71%	N/A	7.42%	
MSCI ACWI ex US IMI Growth	-6.50%	3.98%	-12.99%	8.98%	4.21%	9.10%	5.71%	
William Blair ISCE ⁶								4/2007
Gross of Fees	-13.61%	1.06%	-20.75%	5.43%	2.61%	12.66%	4.11%	
William Blair Custom Benchmark	-10.93%	2.31%	-16.18%	8.45%	4.25%	10.75%	2.30%	

Mercer provided Gross Return data 1990-2010 and Net Return data 2002-2010. Therefore, account Gross and Net Return inception dates may differ. Callan provided data 2010 to present.

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 $^{^6}$ William Blair ISCE benchmark reflects MSCI World ex US SM Cap Index through 5/31/12 and MSCI ACWI ex US Sm Cap Growth Index thereafter.

M=Minority Manager

Investment Manager Performance Report Fixed Income - Gross

Reporting for the Period ending January 31, 2019

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	Fiscal YTD Ending	3 Months Ending	12 Months Ending	3 Years Ending	5 Years Ending	10 Years Ending	Since	Inception
	01/31/19	01/31/19	01/31/19	01/31/19	01/31/19	01/31/19	Inception	Date
FIXED INCOME								1/1991
Gross of Fees	2.84%	3.69%	1.82%	2.77%	2.86%	4.65%	5.95%	
Fixed Income Benchmark	2.73%	3.53%	2.25%	1.95%	2.44%	3.68%	5.76%	
NTGI Govt/Credit Index FI								1/1994
Gross of Fees	2.66%	3.46%	1.86%	2.10%	2.44%	3.74%	5.14%	
Bloomberg Govt/Credit Bond	2.71%	3.55%	1.93%	2.11%	2.47%	3.74%	5.12%	
Garcia Hamilton FICM								10/2010
Gross of Fees	2.11%	2.72%	2.69%	2.37%	3.25%	N/A	3.86%	
Bloomberg Aggregate Index	2.73%	3.53%	2.25%	1.95%	2.44%	3.68%	2.65%	
LM Capital FICP ^{M7}								11/2004
Gross of Fees	2.66%	3.34%	1.27%	2.46%	2.84%	3.97%	4.15%	
Bloomberg Aggregate Index	2.73%	3.53%	2.25%	1.95%	2.44%	3.68%	3.85%	

 $^{^7} LM$ Capital's mandate was changed from Core to Core Plus on 3/1/13.

(Fixed Income continued on next page)

Mercer provided Gross Return data 1990-2010 and Net Return data 2002-2010. Therefore, account Gross and Net Return inception dates may differ. Callan provided data 2010 to present.

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M=Minority Manager

Investment Manager Performance Report Fixed Income - Gross

Reporting for the Period ending January 31, 2019

	Fiscal YTD Ending	3 Months Ending	12 Months Ending	3 Years Ending	5 Years Ending	10 Years Ending	Since	Inception
	01/31/19	01/31/19	01/31/19	01/31/19	01/31/19	01/31/19	Inception	<u>Date</u>
FIXED INCOME								1/1991
Pugh FIC ^M								10/2010
Gross of Fees	2.63%	3.40%	1.27%	2.05%	2.59%	N/A	2.99%	
Bloomberg Aggregate Index	2.73%	3.53%	2.25%	1.95%	2.44%	3.68%	2.65%	
Taplin Canida FI								11/2004
Gross of Fees	2.57%	3.40%	1.91%	3.69%	2.97%	4.89%	4.00%	
Bloomberg Aggregate Index	2.73%	3.53%	2.25%	1.95%	2.44%	3.68%	3.85%	
WAMCO FICP								2/2003
Gross of Fees	3.74%	4.92%	1.68%	4.24%	3.76%	6.75%	5.21%	
Bloomberg Aggregate Index	2.73%	3.53%	2.25%	1.95%	2.44%	3.68%	3.94%	

Mercer provided Gross Return data 1990-2010 and Net Return data 2002-2010. Therefore, account Gross and Net Return inception dates may differ. Callan provided data 2010 to present.

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M=Minority Manager

Investment Manager Performance Report Real Estate, Private Equity & Absolute Return - Gross

Reporting for the Period ending January 31, 2019

	Fiscal YTD Ending	3 Months Ending	12 Months Ending	3 Years Ending	5 Years Ending	10 Years Ending	Since	Inception
	01/31/19	01/31/19	01/31/19	01/31/19	01/31/19	01/31/19	<u>Inception</u>	<u>Date</u>
REAL ESTATE								1/2002
Gross of Fees	4.75%	1.83%	9.95%	8.63%	11.14%	5.94%	7.82%	
NFI-ODCE Equal Weight Index ⁸	3.94%	1.52%	7.20%	7.22%	9.35%	6.59%	7.13%	
PRIVATE EQUITY								1/2002
Gross of Fees	6.59%	2.68%	13.47%	12.66%	13.47%	10.25%	9.18%	

 $^{^8\}mbox{The NFI-ODCE}$ returns are estimated from prior quarter until final results are published.

Returns for Real Estate, Private Equity and Infrastructure are reported on a quarter lag.

M=Minority Manager

Investment Manager Performance Report Infrastructure - Gross

Reporting for the Period ending January 31, 2019

	Fiscal YTD	3 Months	12 Months	3 Years	5 Years	10 Years		
	Ending	Ending	Ending	Ending	Ending	Ending	Since	Inception
	01/31/19	01/31/19	01/31/19	01/31/19	01/31/19	01/31/19	Inception	<u>Date</u>
INFRASTRUCTURE								11/2008
Gross of Fees	2.11%	1.86%	7.47%	10.22%	6.14%	6.88%	6.76%	
Infrastructure Benchmark	3.75%	6.25%	2.80%	6.02%	6.81%	7.40%	7.42%	
Brookfield Infr-OE								11/2016
Gross of Fees	2.60%	1.30%	14.02%	N/A	N/A	N/A	16.71%	117 2010
Infrastructure Benchmark	3.75%	6.25%	2.80%	6.02%	6.81%	7.40%	5.37%	
JP Morgan Infr-OE								11/2008
Gross of Fees	1.02%	2.31%	7.37%	7.48%	5.47%	5.28%	5.19%	
Infrastructure Benchmark	3.75%	6.25%	2.80%	6.02%	6.81%	7.40%	7.41%	
Macquarie (MIP II) Infr								9/2008
Gross of Fees	3.00%	1.79%	7.07%	6.55%	3.92%	7.94%	7.57%	
Infrastructure Benchmark	3.75%	6.25%	2.80%	6.02%	6.81%	7.40%	7.42%	
Macquarie European Fd III Infr								10/2008
Gross of Fees	3.25%	1.21%	5.43%	18.44%	9.40%	9.45%	8.75%	
Infrastructure Benchmark	3.75%	6.25%	2.80%	6.02%	6.81%	7.40%	7.42%	

Returns for Real Estate, Private Equity and Infrastructure are reported on a quarter lag.

Mercer provided Gross Return data 1990-2010 and Net Return data 2002-2010. Therefore, account Gross and Net Return inception dates may differ. Callan provided data 2010 to present.

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M=Minority Manager

Chicago Teachers' Pension Fund **Investment Manager Performance Report Manager of Manager Composite Performance - Gross** Reporting for the Period ending January 31, 2019 Fiscal YTD 3 Months 12 Months 5 Years 3 Years 10 Years **Ending Ending Ending Ending Ending Ending** Since Inception 01/31/19 01/31/19 01/31/19 01/31/19 01/31/19 01/31/19 **Inception** <u>Date</u> MANAGER OF MANAGER COMPOSITE Attucks Asst Mgmt MOM^{M9} 12/2013 Gross of Fees -3.09% 2.89% -7.15% 10.67% 6.60% N/A 6.26% **Attucks Custom Benchmark** -1.74% 3.30% -6.89% 10.95% 6.06% N/A 5.43%

⁹Attucks' mandate was changed from Domestic to Best in Class in December, 2013.

M=Minority Manager

Investment Manager Performance Report Asset Class Summary - Net

Reporting for the Period ending January 31, 2019

	Fiscal YTD Ending	3 Months Ending	12 Months Ending	3 Years Ending	5 Years Ending	10 Years Ending	Since	Inception
	01/31/19	01/31/19	01/31/19	01/31/19	01/31/19	01/31/19	Inception	<u>Date</u>
DOMESTIC EQUITY Net of Fees Domestic Equity Benchmark	-1.56% -0.32%	0.50% 0.45%	-2.98% -2.26%	13.65% 14.19%	9.79% 10.41%	14.79% 15.15%	7.66% 7.77%	1/2002
GLOBAL EQUITY Net of Fees Global Equity Benchmark	-6.74% -4.81%	2.00% 3.46%	-14.03% -13.04%	8.20% 9.47%	3.27% 3.04%	9.33% 8.31%	6.96% 6.16%	1/2002
FIXED INCOME Net of Fees Fixed Income Benchmark	2.79% 2.73%	3.66% 3.53%	1.72% 2.25%	2.67% 1.95%	2.76% 2.44%	4.56% 3.68%	4.57% 4.29%	1/2002
REAL ESTATE Net of Fees NFI-ODCE Equal Weight Index	4.40% 3.94%	1.76% 1.52%	9.23% 7.20%	7.92% 7.22%	10.41% 9.35%	5.35% 6.59%	7.35% 7.13%	1/2002
PRIVATE EQUITY Net of Fees	6.45%	2.68%	13.21%	12.36%	13.25%	10.10%	9.08%	1/2002
INFRASTRUCTURE Net of Fees Benchmark - Absolute	1.98%	1.80%	7.19% 2.80%	9.68% 6.02%	5.59% 6.81%	6.36% 7.40%	6.25% 7.42%	11/2008

Chicago Teachers' Pension Fund **Investment Manager Performance Report Domestic Equity - Net** Reporting for the Period ending January 31, 2019 Fiscal YTD 3 Months 12 Months 3 Years 10 Years Ending Ending **Ending Ending Ending Ending** Since Inception 01/31/19 01/31/19 01/31/19 01/31/19 01/31/19 01/31/19 Inception Date DOMESTIC EQUITY 1/2002 Net of Fees -1.56% 0.50% -2.98% 13.65% 9.79% 14.79% 7.66% **Domestic Equity Benchmark** -0.32% 0.45% -2.26% 14.19% 10.41% 15.15% 7.77% NTGI 500 Index LCC 4/1990 Net of Fees 0.03% -0.30% -2.91% 13.85% 10.84% 9.66% 14.95% S&P 500 Index 0.61% -2.31% 14.02% 10.96% 15.00% 9.75% 0.26% Rhumbline Rsl 1000 LCC^M 6/2007 Net of Fees 0.31% 0.51% -2.20% 14.03% 10.57% 15.16% 7.37% Russell 1000 Index 0.33% 0.51% -2.17% 14.14% 10.68% 15.17% 7.31% Rhumbline Rsl 1000 LCG^M 9/2017 0.67% Gross of Fees 0.10% 0.33% N/A N/A 11.59% N/A

0.24%

5.01%

0.03%

16.60%

21.75%

16.51%

12.97%

11.12%

12.57%

16.86%

18.10%

16.77%

11.62%

10.91%

9.06%

9/1992

Net of Fees

Zevenbergen US ACE^M

(Domestic Equity continued on next page)

0.08%

-5.38%

-0.54%

0.68%

2.74%

0.63%

Russell 1000 Growth Index

Russell 3000 Growth Index

M=Minority Manager

Investment Manager Performance Report Domestic Equity - Net

Reporting for the Period ending January 31, 2019

	Fiscal YTD Ending	3 Months Ending	12 Months Ending	3 Years Ending	5 Years Ending	10 Years Ending	Since	Inception
	01/31/19	01/31/19	01/31/19	01/31/19	01/31/19	01/31/19	Inception	<u>Date</u>
Channing US ACE ^{M2}								6/2009
Net of Fees	-4.92%	3.23%	-9.04%	10.44%	6.72%	N/A	12.79%	
Russell 3000 Value Index	-0.11%	0.26%	-4.76%	11.79%	8.20%	15.17%	14.19%	
BMO Global-Harris LCV ³								7/1999
Net of Fees	-1.53%	0.02%	-7.56%	11.85%	8.77%	13.46%	7.06%	
Harris Benchmark	0.57%	0.34%	-4.81%	11.62%	8.33%	13.39%	5.02%	
NTGI Structured SCC								1/1991
Net of Fees	-6.84%	-0.09%	-2.46%	14.38%	8.16%	15.86%	11.94%	
Russell 2000 Index	-8.05%	-0.41%	-3.52%	14.71%	7.26%	14.52%	10.55%	
BMO Disciplined SCG								7/2018
Net of Fees	N/A	-0.66%	N/A	N/A	N/A	N/A	-9.33%	
Russell 2000 Growth Index	-7.78%	0.06%	-2.63%	15.55%	7.83%	15.68%	-9.34%	
Conestoga SCG								7/2018
Net of Fees	N/A	-1.32%	N/A	N/A	N/A	N/A	-7.17%	
Russell 2000 Growth Index	-7.78%	0.06%	-2.63%	15.55%	7.83%	15.68%	-9.34%	
Phocas SCV								7/2016
Net of Fees	-11,11%	-1.55%	-9.79%	N/A	N/A	N/A	6.99%	
Russell 2000 Value Index	-8.32%	-0.90%	-4.51%	13.76%	6.62%	13.28%	10.51%	

²Channing US ACE* - As of October, 2011, Channing's mandate was changed from Mid Cap Value (Inception 6/2009) to All Cap Value. Channing Benchmark reflects Russell Mid Cap Value Index through 9/30/11 and Russell 3000 Value Index thereafter.

Mercer provided Gross Return data 1990-2010 and Net Return data 2002-2010. Therefore, account Gross and Net Return inception dates may differ. Callan provided data 2010 to present.

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 $^{^3}BMO\space{-0.05em}{'s}$ Benchmark reflects S&P 500 through 12/31/02 and Russell 1000 Value thereafter.

M=Minority Manager

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	Investi		ager Perf		керог						
Global Equity - Net											
Reporting for the Period ending January 31, 2019											
	Fiscal YTD Ending	3 Months Ending	12 Months Ending	3 Years Ending	5 Years Ending	10 Years Ending	Since	Inception			
	01/31/19	01/31/19	01/31/19	<u>01/31/19</u>	01/31/19	01/31/19	<u>Inception</u>	<u>Date</u>			
GLOBAL EQUITY								1/2002			
Net of Fees	-6.74%	2.00%	-14.03%	8.20%	3.27%	9.33%	6.96%				
Global Equity Benchmark	-4.81%	3.46%	-13.04%	9.47%	3.04%	8.31%	6.16%				
Ariel EAFE ILCV ^M								7/2016			
Net of Fees	-1.52%	2.65%	-8.03%	N/A	N/A	N/A	5.10%				
MSCI EAFE	-5.53%	1.27%	-12.51%	7.74%	2.66%	8.11%	7.79%				
Earnest Partners EME ^M								3/2013			
Net of Fees	0.99%	8.34%	-14.40%	14.19%	5.66%	N/A	N/A				
MSCI Emerging Markets Index	-0.23%	10.32%	-13.90%	15.32%	5.15%	10.03%	2.49%				
Earnest Partners ILCE ^M								4/2007			
Net of Fees	-5.68%	1.85%	-13.23%	11.61%	4.39%	11.06%	4.79%				
MSCI ACWI ex US Index	-4.10%	3.66%	-12.58%	9.59%	3.11%	8.35%	1.87%				

(Global Equity continued on next page)

Mercer provided Gross Return data 1990-2010 and Net Return data 2002-2010. Therefore, account Gross and Net Return inception dates may differ. Callan provided data 2010 to present.

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M=Minority Manager

Investment Manager Performance Report Global Equity - Net

Reporting for the Period ending January 31, 2019

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	Fiscal YTD	3 Months	12 Months	3 Years	5 Years	10 Years	Cinas	Incontic
	Ending	Ending	Ending	Ending	Ending	Ending	Since	Inceptio
	<u>01/31/19</u>	<u>01/31/19</u>	<u>01/31/19</u>	<u>01/31/19</u>	<u>01/31/19</u>	01/31/19	Inception	Date
Lazard ILCE ⁴								1/2001
Net of Fees	-3.91%	2.97%	-12.53%	7.07%	3.32%	9.04%	5.32%	
Lazard Benchmark	-4.10%	3.66%	-12.58%	9.59%	3.11%	8.35%	4.36%	
Morgan Stanley ILCE								4/1995
Net of Fees	-7.30%	0.28%	-12.06%	6.02%	2.66%	7.92%	8.03%	
MSCI EAFE Index	-5.53%	1.27%	-12.51%	7.74%	2.66%	8.11%	4.73%	
Leading Edge IE MOM ^M								4/2010
Net of Fees	-5.96%	3.01%	-13.06%	9.52%	3.15%	N/A	4.70%	
MSCI ACWI ex US Index	-4.10%	3.66%	-12.58%	9.59%	3.11%	8.35%	4.01%	
DFA ISCV ⁵								6/2012
Net of Fees	-12.23%	-2.06%	-20.51%	7.31%	2.80%	N/A	9.67%	
MSCI ACWI ex US Small Cap	-9.83%	0.53%	-15.08%	9.56%	4.30%	11.62%	9.15%	

⁴Lazard ILCE Benchmark reflects the MSCI EAFE Index through 6/30/02 and MSCI ACWI ex-US Index thereafter.

(Global Equity continued on next page)

Mercer provided Gross Return data 1990-2010 and Net Return data 2002-2010. Therefore, account Gross and Net Return inception dates may differ. Callan provided data 2010 to present.

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 $^{^5}$ DFA transitioned from Domestic Small Cap mandate to International Small Cap mandate in May, 2012.

M=Minority Manager

Chicago Teachers' Pension Fund **Investment Manager Performance Report Global Equity - Net** Reporting for the Period ending January 31, 2019 Fiscal YTD 3 Months 10 Years 12 Months 3 Years 5 Years **Ending Ending Ending Ending Ending Ending** Since Inception 01/31/19 01/31/19 01/31/19 01/31/19 01/31/19 01/31/19 **Inception Date** Strategic Global EAFE 7/2016 -4.87% 2.85% -12.15% Net of Fees N/A N/A N/A 7.42% MSCI EAFE Index -5.53% 1.27% -12.51% 7.74% 2.66% 8.11% 7.79% 2/2010 William Blair ILACG -9.56% 1.57% Net of Fees -15.34% 7.44% 3.34% N/A 7.03% MSCI ACWI ex US IMI Growth -6.50% 3.98% 4.21% -12.99% 8.98% 9.10% 5.71% William Blair ISCE⁶ 4/2007 -14.00% 0.81% 4.54% 11.71% Gross of Fees -21.44% 1.75% 3.12%

-16.18%

8.45%

4.25%

10.75%

2.30%

2.31%

-10.93%

William Blair Custom Benchmark

⁶William Blair ISCE benchmark reflects MSCI World ex US SM Cap Index through 5/31/12 and MSCI ACWI ex US Sm Cap Growth Index thereafter.

M=Minority Manager

Investment Manager Performance Report Fixed Income - Net

Reporting for the Period ending January 31, 2019

	Fiscal YTD Ending	3 Months Ending	12 Months Ending	3 Years Ending	5 Years Ending	10 Years Ending	Since	Inception
	01/31/19	01/31/19	01/31/19	01/31/19	01/31/19	01/31/19	Inception	Date
FIXED INCOME								1/2002
Net of Fees	2.79%	3.66%	1.72%	2.67%	2.76%	4.56%	4.57%	
Fixed Income Benchmark	2.73%	3.53%	2.25%	1.95%	2.44%	3.68%	4.29%	
NTGI Govt/Credit Index FI								1/1994
Net of Fees	2.65%	3.46%	1.85%	2.09%	2.43%	3.73%	5.13%	
Bloomberg Govt/Credit Bond	2.71%	3.55%	1.93%	2.11%	2.47%	3.74%	5.12%	
Garcia Hamilton FIC ^M								10/2010
Net of Fees	2.04%	2.68%	2.55%	2.20%	3.07%	N/A	3.68%	
Bloomberg Aggregate Index	2.73%	3.53%	2.25%	1.95%	2.44%	3.68%	2.65%	
LM Capital FICP ^{M7}								11/2004
Gross of Fees	2.58%	3.30%	1.11%	2.30%	2.68%	3.80%	3.96%	
Bloomberg Aggregate Index	2.73%	3.53%	2.25%	1.95%	2.44%	3.68%	3.85%	

 $^{^{7}} LM$ Capital's mandate was changed from Core to Core Plus on 3/1/13.

(Fixed Income continued on next page)

Mercer provided Gross Return data 1990-2010 and Net Return data 2002-2010. Therefore, account Gross and Net Return inception dates may differ. Callan provided data 2010 to present.

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M=Minority Manager

Investment Manager Performance Report Fixed Income - Net

Reporting for the Period ending January 31, 2019

	•	•		,	•			
	Fiscal YTD Ending	3 Months Ending	12 Months Ending	3 Years Ending	5 Years Ending	10 Years Ending	Since	Inception
	01/31/19	01/31/19	01/31/19	01/31/19	01/31/19	01/31/19	Inception	Date
Pugh FIC ^M								10/2010
Net of Fees	2.56%	3.36%	1.76%	1.90%	2.44%	N/A	2.82%	
Bloomberg Aggregate Index	2.73%	3.53%	2.25%	1.95%	2.44%	3.68%	2.65%	
Taplin Canida FI								11/2004
Net of Fees	2.50%	3.16%	1.60%	3.55%	2.82%	4.73%	3.83%	
Bloomberg Aggregate Index	2.73%	3.53%	2.25%	1.95%	2.44%	3.68%	3.85%	
WAMCO FICP								2/2003
Net of Fees	3.65%	4.87%	1.51%	4.06%	3.57%	6.57%	5.03%	
Bloomberg Aggregate Index	2.73%	3.53%	2.25%	1.95%	2.44%	3.68%	3.94%	

M=Minority Manager

Chicago Teachers' Pension Fund Investment Manager Performance Report

Real Estate, Private Equity & Absolute Return - Net

Reporting for the Period ending January 31, 2019

	Fiscal YTD Ending	3 Months Ending	12 Months Ending	3 Years Ending	5 Years Ending	10 Years Ending	Since	Inception
	01/31/19	01/31/19	01/31/19	01/31/19	01/31/19	01/31/19	Inception	<u>Date</u>
REAL ESTATE								1/2002
Net of Fees	4.40%	1.76%	9.23%	7.92%	10.41%	5.35%	7.35%	
NFI-ODCE Equal Weight Index ⁷	3.94%	1.52%	7.20%	7.22%	9.35%	6.59%	7.13%	
PRIVATE EQUITY								1/2002
Net of Fees	6.45%	2.68%	13.21%	12.36%	13.25%	10.10%	9.08%	

 $^{^8\}mbox{The NFI-ODCE}$ returns are estimated from prior quarter until final results are published.

Returns for Real Estate, Private Equity and Infrastructure are reported on a quarter lag.

M=Minority Manager

Investment Manager Performance Report Infrastructure - Net

Reporting for the Period ending January 31, 2019

				-				
	Fiscal YTD	3 Months	12 Months	3 Years	5 Years	10 Years		
	Ending	Ending	Ending	Ending	Ending	Ending	Since	Inception
	01/31/19	01/31/19	01/31/19	01/31/19	01/31/19	01/31/19	Inception	<u>Date</u>
INFRASTRUCTURE								11/2008
Net of Fees	1.98%	1.80%	7.19%	9.68%	5.59%	6.36%	6.25%	
Benchmark - Absolute	3.75%	6.25%	2.80%	6.02%	6.81%	7.40%	7.42%	
Brookfield Infr-OE								11/2016
Gross of Fees	2.60%	1.30%	12.72%	N/A	N/A	N/A	12.09%	
Benchmark - Absolute	3.75%	6.25%	2.80%	6.02%	6.81%	7.40%	5.37%	
JP Morgan Infr-OE								11/2008
Net of Fees	2.08%	0.57%	6.65%	6.50%	4.42%	4.28%	4.21%	
Benchmark - Absolute	6.25%	3.75%	2.80%	6.02%	6.81%	7.40%	7.41%	
Macquarie (MIP II) Infr								9/2008
Net of Fees	3.10%	1.83%	7.28%	6.62%	3.94%	7.95%	7.58%	
Benchmark - Absolute	3.75%	6.25%	2.80%	6.02%	6.81%	7.40%	7.42%	
Macquarie European Fd III Infr								10/2008
Net of Fees	3.48%	1.28%	5.79%	18.54%	9.40%	9.45%	8.75%	
Benchmark - Absolute	3.75%	6.25%	2.80%	6.02%	6.81%	7.40%	7.42%	

M=Minority Manager

Chicago Teachers' Pension Fund **Investment Manager Performance Report Manager of Manager Composite Performance - Net** Reporting for the Period ending January 31, 2019 Fiscal YTD 3 Months 12 Months 5 Years 10 Years 3 Years Ending **Ending** Ending Ending Ending **Ending** Since Inception 01/31/19 01/31/19 01/31/19 01/31/19 01/31/19 01/31/19 Inception <u>Date</u> MANAGER OF MANAGER COMPOSITE Attucks Asst Mgmt MOM^{M9} 12/2013 Gross of Fees -3.38% 2.73% -7.70% 10.02% 5.99% N/A 5.68% **Attucks Custom Benchmark** -1.74% 3.30% -6.89% 10.95% 6.06% N/A 5.43%

⁹Attucks' mandate was changed from Domestic to Best in Class in December, 2013.

M=Minority Manager

Chicago Teachers' Pension Fund Watch List Summary

Reporting for the Period ending January 31, 2019

		reporting to	i the remode	mamig oundury	3., 20.,		
<u>Manager</u>	Current AUM (in millions)	Board Actions	<u>Reason</u>	Date Watch Started	# Months on Watch	Last Due Diligence Meeting	<u>Notes</u>
Channing	\$135.0	January, 2018: Placed on Watch List and Monitor	Organizational Changes	January, 2018	13	February, 2019	AUM when placed on Watch List was \$150.2. Channing was placed on Watch List due to organizational changes.
Ariel EAFE	\$ 74.3	May, 2018: Placed on Watch List and Monitor	Compliance	May, 2018	8	October, 2018	AUM when place on Watch List was \$78.0211.1. Ariel EAFE was placed on Watch List due to qualitative concerns.

Chicago Teachers' Pension Fund Market Values & Diversity by Manager

(in millions of dollars)
Reporting for the Period ending January 31, 2019

				Diff	ference		
	% Asset	%		(in mill	ions)	(mth	h-to-mth)
Ethnicity	<u>Class</u>	<u>Fund</u>		<u>01/31/19</u>	12/31/2018	<u>\$</u>	<u>%</u>
			Domestic Equity				
Woman	1%	0%	Attucks-Matarin SCC	21.1	19.0	2.1	10%
Majority	1%	0%	BMO SCG	35.9	32.0	3.9	11%
Majority	1%	0%	Conestoga SCG	37.5	34.9	2.7	7%
Majority	5%	2%	NTGI Structured SCC	166.8	150.7	16.1	10%
Asian American	4%	1%	Phocas SCV	<u>119.5</u>	<u>107.4</u>	12.1	10%
	12%	4%	Subtotal - U.S. Small Capitalization Equity	380.8	344.0	36.9	10%
African American	4%	1%	Channing US ACE	135.0	118.7	16.3	12%
Woman	5%	2%	Zevenbergen US ACE	<u>169.9</u>	<u>144.8</u>	<u>25.1</u>	<u>15%</u>
	10%	3%	Subtotal - U.S. All Capitalization Equity	304.9	263.5	41.3	14%
African American	0%	0%	Attucks-Paradigm LCV	10.2	20.9	-10.7	-105%
African American	0%	0%	Attucks-StoneRidge LCC	0.0	20.9	-20.8	-80123%
African American	1%	0%	Attucks-StoneRidge Lcchq	20.4	0.0	20.4	100%
Majority	9%	3%	BMO Global-Harris LCV	300.6	278.7	21.9	7%
Majority	4%	1%	NTGI 500 Index LCC	130.9	150.3	-19.3	-15%
Woman	53%	16%	Rhumbline Rsl1000 LCC	1666.5	1541.5	124.9	7%
Woman	10%	3%	Rhumbline RSL1000 LCG	<u>326.9</u>	<u>300.4</u>	26.5	8%
			Rhumbline TOTAL	1993.4	1841.9		
Majority	0%	0%	Ivy Investments (Waddell & Reed) LCC	0.0	0.0	0.0	N/A
	77%	24%	Subtotal - U.S. Large Capitalization Equity	2455.5	2312.7	142.8	6%

Source of Market Value data is the CTPF Custodian.
This report is unaudited and intended for informational purposes only.

Market Values & Diversity by Manager

(in millions of dollars)

Reporting for the Period ending January 31, 2019

				Market Value			ference
% Asset %		(in millions)		lions)	(mth-to-mth		
<u>Ethnicity</u>	Class	<u>Fund</u>		<u>01/31/19</u>	12/31/2018	<u>\$</u>	<u>%</u>
(Domestic Equity continued or	n next pag	ge)					
			<u>Miscellaneous</u>				
African American	0%	0%	Attucks-Cash Acct LCE	0.0	0.0	0.0	0%
	1%	0%	Attucks -Transition	<u>29.7</u>	0.0	<u>29.6</u>	N/A
	0%	0%	Subtotal - Miscellaneous	29.7	0.0	29.6	N/A
	100%	31%	Total Domestic Equity	3170.9	2920.3	250.6	8%

Domestic Equity Totals	<u>Class</u>	# of Accts	Market Value
African American	6.2%	5	195.3
Asian or Pacific Islander	3.8%	1	119.5
Hispanic or Latino	0.0%	0	0.0
Woman	68.9%	4	2184.3
Disabled	0.0%	0	0.0
Multiple	0.0%	0	0.0
American Indian or Alaska Native	0.0%	0	0.0
Majority	<u>21.2%</u>	<u>4</u>	<u>671.8</u>
Asset Class Total	100.0%	14	\$3,170.9

(in millions of dollars)
Reporting for the Period ending January 31, 2019

% Asset		%		Market Va (in millio	Difference (mth-to-mth)		
Ethnicity	Class	<u>Fund</u>		<u>01/31/19</u> `	12/31/2018	<u>\$</u>	<u>%</u>
			Global Equity				
African American	1%	0%	Attucks-Brown Cap ISCG	20.8	25.7	-4.9	-23%
Majority	5%	1%	DFA ISCV	149.2	145.0	4.3	3%
Majority	6%	2%	William Blair ISCE	<u>173.3</u>	<u>159.3</u>	<u>14.0</u>	<u>8%</u>
	11%	3%	Subtotal - Global Small Cap Equity	343.3	330.0	13.3	4%
African American	2%	1%	Ariel EAFE ILCV	74.3	69.8	4.6	6%
Woman	1%	0%	Attucks-GlobeFlex Global	21.0	20.8	0.2	1%
African American	18%	5%	Earnest Partners ILCE	561.3	522.7	38.7	7%
Majority	18%	6%	Lazard Asset Mgt ILCE	564.3	528.9	35.4	6%
Latino	1%	0%	LEIA-Ativo IE	20.6	19.2	1.4	7%
African American	1%	0%	LEIA-Brown IE	18.8	17.6	1.3	7%
Asian American	0%	0%	LEIA-Cash Acct IE	0.0	0.0	0.0	0%
African American	0%	0%	LEIA-Channing IE	14.9	13.7	1.1	8%
American Indian	1%	0%	LEIA Denali IE	20.5	19.2	1.3	6%
Asian American	1%	0%	LEIA-Foresight IE	18.8	17.5	1.3	7%
Woman	1%	0%	LEIA GlobeFlex IE	23.3	21.3	1.9	8%
Asian American	0%	0%	LEIA-John Hsu IEG	0.0	0.0	0.0	0%
Majority	18%	5%	Morgan Stanley ILCE	559.5	532.6	26.9	5%

(Global Equity continued on next page)

Market Values & Diversity by Manager

(in millions of dollars)

Reporting for the Period ending January 31, 2019

				Market V	Difference		
	% Asset %			(in millions)		(mth-to-mth)	
Ethnicity	<u>Class</u>	<u>Fund</u>		<u>01/31/19</u>	12/31/2018	<u>\$</u>	<u>%</u>
Woman	2%	1%	Strategic Global EAFE	73.5	68.0	5.5	7%
Majority	18%	5%	William Blair ILACG	<u>563.5</u>	<u>525.2</u>	38.3	<u>7%</u>
	81%	25%	Subtotal - Global Large Cap Equity	2534.3	2376.4	157.9	6%
Latino	1%	0%	Attucks-Ativo EME	17.7	17.4	0.2	1%
Latino	1%	0%	Attucks-GloVista EME	18.2	18.1	0.1	1%
Woman	1%	0%	Att Redwood IACC	20.7	20.7	0.0	0%
African American	6%	2%	Earnest Partners EME	176.2	161.8	14.4	8%
African American	0%	0%	LEIA-Metis EME	<u>6.5</u>	<u>5.9</u>	0.6	<u>9%</u>
	8%	2%	Subtotal - Emerging Managers	239.2	223.9	15.3	6%
	100%	30%	Total Global Equity	3116.8	2930.3	186.6	6%

Global Equity Totals	<u>Class</u>	# of Accts	Market Value
African American	28.0%	6	872.8
Asian or Pacific Islander	0.6%	3	18.8
Hispanic or Latino	1.8%	3	56.5
Woman	4.4%	4	138.4
Disabled	0.0%	0	0.0
Multiple	0.0%	0	0.0
American Indian or Alaska Native	0.7%	1	20.5
Majority	<u>64.5</u> %	<u>5</u>	2009.9
Asset Class Total	100.0%	22	\$3,116.8

Source of Market Value data is the CTPF Custodian.
This report is unaudited and intended for informational purposes only.

(in millions of dollars)
Reporting for the Period ending January 31, 2019

				Market Va	lue	Diffe	rence
	% Asset	%		(in million	ns)	(mth-	to-mth)
<u>Ethnicity</u>	Class	<u>Fund</u>		<u>01/31/19</u>	<u>12/31/2018</u>	<u>\$</u>	<u>%</u>
			Fixed Income				
Latino	1%	0%	Attucks-LM Capital EMD	13.8	13.6	0.2	2%
Latino	1%	0%	Attucks-Ramirez FIC	18.2	18.1	0.1	1%
Latino	9%	2%	Garcia Hamilton FIC	227.7	225.7	1.9	1%
Latino	8%	2%	LM Capital FICP	201.5	198.4	3.1	2%
Majority	35%	9%	NTGI Govt/Credit Index FI	923.5	914.8	8.7	1%
Woman	8%	2%	Pugh FIC	221.4	219.6	1.8	1%
Majority	8%	2%	Taplin Canida Fl	222.5	220.1	2.4	1%
Majority	22%	6%	WAMCO FICP	<u>598.1</u>	<u>588.2</u>	9.9	<u>9%</u> 1%
	91%	24%	Subtotal - US Fixed Income	2426.8	2398.5	28.3	1%
Woman	1%	0%	Attucks-New Century GT	<u>19.0</u>	<u>19.8</u>	-0.8	<u>-4%</u>
	1%	0%	Subtotal - Non US Fixed Income	19.0	19.8	-0.8	-4%
	92%	24%	Total Fixed Income	2445.8	2418.3	27.5	1%
			<u>Cash</u>				
	8%	2%	Cash	215.4	216.2	-0.8	0%
	0%	0%	Miscellaneous	<u>2.1</u>	<u>2.1</u>	0.0	<u>-1%</u>
	8%	2%	Subtotal - Cash	217.5	218.3	-0.9	0%
	100%	26%	Total - Fixed Income & Cash	2663.3	2636.6	26.6	1%

(Fixed Income continued on next page)

Fixed Income Totals Class # of Accts Market Value

Source of Market Value data is the CTPF Custodian.
This report is unaudited and intended for informational purposes only.

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(in millions of dollars)
Reporting for the Period ending January 31, 2019

Market Value					Diffe	erence		
	% Asset	%			(in millio	ns)	(mth-	to-mth)
<u>Ethnicity</u>	<u>Class</u>	<u>Fund</u>			<u>01/31/19</u>	12/31/2018	<u>\$</u>	<u>%</u>
African American			0.0%	0	0.0			
Asian or Pacific Islander			0.0%	0	0.0			
Hispanic or Latino			17.3%	4	461.3			
Woman			9.0%	2	240.4			
Disabled			0.0%	0	0.0			
Multiple			0.0%	0	0.0			
American Indian or Alaska	Native		0.0%	0	0.0			
Majority			<u>65.5</u> %	<u>3</u>	1744.2			
Asset Class Total			91.8%	9	\$2,445.8			
Cash, Miscellaneous, Other	r		<u>8.2%</u>		217.46			
Grand Total			100.0%		\$2,663.3			
			Real Estate					
African American	2%	0%	BIG RE Fd I		11.2	8.5	2.7	0%
Majority	4%	0%	BREDS HG LP		25.6	18.5	7.1	0%
African American	0%	0%	Capri Select Fd II PRE		0.1	0.1	0.0	0%
Majority	8%	1%	Clarion Lion Industrial		57.4	55.2	2.2	4%
Multiple	1%	0%	EMREFF PRE FOF		9.7	10.7	-1.0	-11%
Majority	0%	0%	Europa Fd III PRE		1.4	1.4	0.0	0%

(in millions of dollars)
Reporting for the Period ending January 31, 2019

	% Asset	%			Market Value (in millions)				erence -to-mth)
Ethnicity	<u>Class</u>	<u>Fund</u>		01/31/	<u>19</u>	12/31/	2018	<u>\$</u>	<u>%</u>
(Real Estate continued on ne	xt page)								
Majority	0%	0%	Fortress Japan Fd I PRE	2.1		4.3		-2.2	-103%
Majority	1%	0%	Fortress Japan Fd II PRE	<u>3.7</u>		4.6		-0.8	-22%
			Fortress Japan TOTAL		5.9		8.8	-3.0	-51%
Majority	0%	0%	Fremont Realty II PRE		0.0		0.0	0.0	0%
Asian American	0%	0%	Green Oak US III		2.8		2.8	0.0	0%
Latino	0%	0%	Hudson Realty Fd V PRE		0.0		0.0	0.0	0%
Asian American	0%	0%	IC Berkeley III PRE		1.1		1.1	0.0	0%
Majority	22%	2%	JP Morgan Strat PRE-OE		157.9		158.3	-0.4	0%
Majority	15%	1%	LaSalle Property PRE-OE		109.1		107.6	1.5	1%
Asian American	0%	0%	Longpoint RE FD I		2.0		0.0	2.0	100%
Majority	0%	0%	ML Asian RE Fd PRE		0.4		0.4	0.0	0%
Latino	1%	0%	Oak Street RE Cap Fund IV		8.1		6.2	1.9	23%
Latino	2%	0%	Southwest MF Ptrs PRE		12.0		12.0	0.0	0%
Disabled	0%	0%	DV Urban Realty I PRE	0.0		0.0		0.0	0%
Disabled	4%	0%	Newport Cap Fund II	<u>25.9</u>		<u>25.6</u>		0.3	1%
			Newport TOTAL		26.0		25.6	0.3	1%
Majority	0%	1%	PRISA Fd I PRE-OE	146.5		146.5		0.0	0%
Majority	3%	0%	PRISA Fd II PRE-OE	<u>23.3</u>		23.0		0.3	1%
			Prudential (Open-end) TOTAL		169.7		169.5	0.3	0%
Majority	12%	1%	UBS TPF PRE-OE		88.5		111.4	-23.0	-26%
Majority	0%	0%	Walton Strt Fd III PRE	0.1		0.1		0.0	3%
Majority	0%	0%	Walton Strt Fd IV PRE	0.3		0.3		0.0	0%

(Real Estate continued on next page)

Market Values & Diversity by Manager

(in millions of dollars)

Reporting for the Period ending January 31, 2019

				1	Difference			
	% Asset %			(in millions)			(mth-to-mth)	
<u>Ethnicity</u>	<u>Class</u>	<u>Fund</u>		01/31/19	<u>12/31</u>	<u>/2018</u>	<u>\$</u>	<u>%</u>
Majority	1%	0%	Walton Strt Fd V PRE	6.0	7.9		-2.0	-33%
Majority	1%	0%	Walton Strt Fd VI PRE	10.5	10.5		0.0	0%
Majority	1%	0%	Walton Strt Mexico Fd 1 PRE	<u>5.1</u>	<u>5.1</u>		0.0	0%
			Walton Street TOTAL		<u>22.0</u>	<u>24.0</u>	<u>-2.0</u>	<u>-9%</u>
	100%	7%	Total Real Estate	7	710.9	722.3	-11.4	-2%

Real Estate Totals	<u>Class</u>	# of Accts	Market Value	
African American	1.6%	2	11.2	
Asian or Pacific Islander	0.8%	3	6.0	
Hispanic or Latino	2.8%	3	20.1	
Woman	0.0%	0	0.0	
Disabled	3.7%	2	26.0	
Multiple	1.4%	1	9.7	
American Indian or Alaska Native	0.0%	0	0.0	
Majority	<u>89.7</u> %	<u>17</u>	637.9	
Asset Class Total	100.00%	28	\$710.9	

Alternative Investments

			Private Equity				
Majority	49%	2%	Adams Strt Many Fd PE	168.8	168.0	0.9	1%
African American	1%	0%	Astra Partners I	<u>1.9</u>	0.0	1.9	100%
(Private Equity continued on nex	t page)						
Majority	0%	0%	EQT Fd VIII	0.2	0.2	0.0	13%
African American	0%	0%	Farol FD II	1.0	1.0	0.0	0%

Source of Market Value data is the CTPF Custodian.

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(in millions of dollars)
Reporting for the Period ending January 31, 2019

				Market Value				erence	
	% Asset	%			(in million	s)		(mth-	-to-mth)
<u>Ethnicity</u>	<u>Class</u>	<u>Fund</u>		01/31	<u>/19</u>	12/31/	<u>2018</u>	<u>\$</u>	<u>%</u>
Majority	0%	0%	Harbourvest Ptrs VI Buyout Fund PE	0.1		0.4		-0.4	-398%
Majority	0%	0%	Harbourvest Ptrs VI PE	0.4		0.4		0.0	0%
Majority	4%	0%	Harbourvest Ptrs VII PE	13.4		13.4		0.0	0%
Majority	2%	0%	Harbourvest Ptrs VIII PE	6.3		6.7		-0.4	-6%
Majority	2%	0%	Harbourvest Ptrs X PE	7.0		7.1		-0.1	-2%
Majority	2%	0%	Harbourvest Ptrs X PE	<u>5.4</u>		<u>5.5</u>		-0.1	-2%
			Harbourvest TOTAL		32.6		33.6	-1.0	-3%
Latino	1%	0%	Hispania Fd II PE		2.7		2.7	0.0	0%
African American	0%	0%	ICV Capital Ptrs II PE	0.2		0.2		0.0	0%
African American	3%	0%	ICV Capital Ptrs III PE	10.9		10.8		0.1	1%
African American	1%	0%	ICV Capital Ptrs IV	2.5		2.3		0.2	9%
			ICV TOTAL		13.5		13.2	0.3	2%
Majority	2%	0%	KKR Americas Fd XII		8.6		9.0	-0.4	-5%
Majority	1%	0%	Mesirow Fd I PE	1.9		1.9		0.0	0%
Majority	2%	0%	Mesirow Fd II PE	7.0		7.0		0.0	0%
Majority	3%	0%	Mesirow Fd IV PE	9.7		9.7		0.0	0%
Majority	5%	0%	Mesirow Fd V PE	16.5		16.5		0.0	0%
Majority	1%	0%	Mesirow Fd VII A PE	2.4		2.5		-0.1	-3%
Majority	1%	0%	Mesirow Fd VII B PE	2.8		2.6		0.2	7%
Majority	0%	0%	Mesirow Fd IX PE	0.6		0.6		0.0	0%
Majority	3%	0%	Mesirow Fd X PE	10.2		<u>10.2</u>		0.0	0%
			Mesirow TOTAL		51.2		51.1	0.1	0%

(Private Equity continued on next page)

Market Values & Diversity by Manager

(in millions of dollars)

Reporting for the Period ending January 31, 2019

				Market Value					Difference		
	% Asset	%			(in millio	ns)		(mth-t	to-mth)		
Ethnicity	<u>Class</u>	<u>Fund</u>		<u>01/31/19</u>		12/31/	2018	<u>\$</u>	<u>%</u>		
African American	1%	0%	Muller M2 MPEFF PE FOF		2.3		2.3	0.0	0%		
Latino	0%	0%	NMS Capital Fd III		1.1		1.1	0.0	0%		
Latino	0%	0%	Palladium Ptrs III PE	0.7		0.7		0.0	0%		
Latino	2%	0%	Palladium Ptrs IV PE	7.6		7.6		0.0	0%		
Latino	1%	0%	Palladium Ptrs V PE	<u>3.4</u>		3.4		0.0	-1%		
			Palladium TOTAL		11.7		11.7	0.0	0%		
Majority	0%	0%	Pantheon Europe Fd II PE	0.1		0.1		0.0	0%		
Majority	0%	0%	Pantheon USA Fd III PE	0.3		0.3		0.0	-4%		
Majority	0%	0%	Pantheon USA Fd IV PE	0.4		0.4		0.0	0%		
Majority	1%	0%	Pantheon Asia Fd V PE	2.2		2.2		0.0	0%		
Majority	1%	0%	Pantheon Europe Fd VI PE	3.8		4.0		-0.1	-4%		
Majority	4%	0%	Pantheon Global Fund 2014	12.6		11.4		1.2	9%		
Majority	0%	0%	Pantheon Select Access	<u>1.2</u>		<u>1.2</u>		0.0	0%		
			Pantheon TOTAL		20.7		19.6	1.0	5%		
African American	1%	0%	Pharos Fd II PE	4.6		4.6		0.0	0%		
African American	4%	0%	Pharos Fd III PE	<u>14.1</u>		<u>14.1</u>		0.0	0%		
			Pharos TOTAL		18.7		18.7	0.0	0%		
African American	1%	0%	RLJ Equity Fd II PE		3.6		0.9	2.6	74%		
African American	0%	0%	Syncom Ptrs V PE		0.9		1.4	-0.5	-59%		
Woman	2%	0%	Turning Rock FD I		<u>5.5</u>		<u>5.5</u>	0.1	1%		
	100%	3%	Total Private Equity		345.0		340.0	5.0	1%		

(in millions of dollars)
Reporting for the Period ending January 31, 2019

	% Asset	%				Market Value (in millions)		
<u>Ethnicity</u>	<u>Class</u>	<u>Fund</u>			01/31/19	12/31/2018	<u>\$</u>	<u>%</u>
Private Equity Totals			<u>Class</u>	# of Accts	Market Value			
African American			12.1%	10	41.9			
Asian or Pacific Islander			0.0%	0	0.0			
Hispanic or Latino			4.5%	5	15.5			
Woman			1.6%	1	5.5			
Disabled			0.0%	0	0.0			
Multiple			0.0%	0	0.0			
American Indian or Alaska	Native		0.0%	0	0.0			
Majority			81.8%	<u>63</u>	282.1			
Asset Class Total			100.00%	79	\$345.0			
			<u>Infrastructure</u>					
Majority			Brookfield Infr Fd III		33.6	30.6	3.1	0.1
Majority	39%	1%	JP Morgan Infr-OE		94.0	94.0	0.0	0.0
Majority	12%	0%	Macquarie (MEIF III) Infr		29.6	29.5	0.1	0.0
Majority	34%	1%	Macquarie (MIP II) Infr		<u>82.8</u>	<u>82.8</u>	0.0	0.0
			Macquaire TOTAL		<u>112.4</u>	<u>112.3</u>	<u>0.1</u>	0.0
	100%	2%	Total - Infrastructure		240.0	236.8	3.2	1%

Market Values & Diversity by Manager

(in millions of dollars)
Reporting for the Period ending January 31, 2019

% Asset	: %			Market Value (in millions)		
Ethnicity Class	<u>Fund</u>		<u>01/31/19</u>	<u>12/31/2018</u>	<u>\$</u>	<u>%</u>
	Cl	# - 6 \$ 4	s Market Value			
Infrastructure Totals	Class	# of Acct	s <u>market value</u>			
African American	0.0%	0	0.0			
Asian or Pacific Islander	0.0%	0	0.0			
Hispanic or Latino	0.0%	0	0.0			
Woman	0.0%	0	0.0			
Disabled	0.0%	0	0.0			
Multiple	0.0%	0	0.0			
American Indian or Alaska Native	0.0%	0	0.0			
Majority	<u>100.0</u> %	<u>4</u>	240.0			
Asset Class Total	100.0%	4	\$240.0			

Grand Total Fund

10,246.9

9,786.3

460.7

5%

Source of Market Value data is the CTPF Custodian.

This report is unaudited and intended for informational purposes only.

(in millions of dollars)

Reporting for the Period ending January 31, 2019

% Asset %	5		Market Valu (in millions)		Difference (mth-to-mth)		
Ethnicity Class Fu	<u>nd</u>		<u>01/31/19</u> `	12/31/2018	<u>\$</u>	<u>%</u>	
Fund Totals	<u>Class</u>	# of Accts	Market Value				
African American	10.9%	23	1121.2				
Asian or Pacific Islander	1.4%	7	144.3				
Hispanic or Latino	5.4%	15	553.3				
Woman	25.1%	11	2568.6				
Disabled	0.3%	2	26.0				
Multiple	0.1%	1	9.7				
American Indian or Alaska Native	0.2%	1	20.5				
Majority	<u>54.5%</u>	<u>96</u>	5585.9				
Asset Class Total	97.9%	156	\$10,029.5				
Cash, Miscellaneous, Other	<u>2.1%</u>		<u>217.46</u>				
Grand Total	100.0%		\$10,246.9				
Total Fund MWDBE Assets	\$4,443.6	MWDBE Asset	ts as % of Total Fund	43%			
MWDBE Active	\$2,450.2	MWDBE Asset	ts as % of Active Assets	s 35%			

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MWDBE Active	\$2,450.2	MWDBE Assets as % of Active Assets	35%
Total Fund	\$10,246.9	Passive Assets as % of Total Fund	32%
Total Fund Active	\$6,981.6	Active Assets as % of Total Fund	68%

Note: Percentages may not add up due to rounding

Source of Market Value data is the CTPF Custodian. This report is unaudited and intended for informational purposes only. 39

Manager of Managers Summary Sheet - Market Values & Diversity by Manager (in millions of dollars) Reporting for the Period ending January 31, 2019 Market Value Difference (in millions) (mth-to-mth) % Asset % Ethnicity Class Fund 01/31/19 12/31/2018 <u>\$</u> <u>%</u> **ATTUCKS** 0% 0% Attucks-Ativo EME Attucks-Brown Cap 0.2 1% 1% 17.7 20.8 17.4 25.7 1.3%

Latino	1%	0%	Attucks-Ativo EME	17.7	17.4	0.2	1.3%
African American	1%	0%	Attucks-Brown Cap ISCG	20.8	25.7	-4.9	-23.4%
African American	0%	0%	Attucks-Cash Acct LCE	0.0	0.0	0.0	0.0%
Woman	1%	0%	Attucks-GlobeFlex Global	21.0	20.8	0.2	1.0%
Latino	1%	0%	Attucks-GloVista EME	18.2	18.1	0.1	0.8%
Latino	1%	0%	Attucks-LM Capital EMD	13.8	13.6	0.2	1.8%
Woman	1%	0%	Attucks-New Century GT	19.0	19.8	-0.8	-3.9%
African American	0%	0%	Attucks-Paradigm LCV	10.2	20.9	-10.7	-105.1%
Latino	1%	0%	Attucks-Ramirez FIC	18.2	18.1	0.1	0.8%
Woman	1%	0%	Att Redwood IACC	20.7	20.7	0.0	0.1%
African American	0%	0%	Attucks-StoneRidge LCC	0.0	20.9	-20.8	8.2%
African American	1%	0%	Attucks-StoneRidge LCChq	20.4	0.0	20.4	8.7%
Woman	1%	0%	Attucks-Matarin SCC	21.1	19.0	2.1	9.8%
African American	1%	0%	Attucks -Transition	<u> 29.7</u>	0.0	<u>29.6</u>	N/A
			Subtotal Attucks	230.7	214.8	15.9	6.9%

Chicago Teachers' Pension Fund Manager of Managers Summary Sheet - Market Values & Diversity by Manager (in millions of dollars) Reporting for the Period ending January 31, 2019 Difference Market Value (in millions) (mth-to-mth) % Asset % Ethnicity Class <u>Fund</u> 01/31/19 12/31/2018 <u>\$</u> <u>%</u> LEADING EDGE Latino 1% 0% LEIA-Ativo IE 20.6 19.2 1.4 7.0% 1% 0% LEIA-Brown IE 18.8 17.6 1.3 6.8% African American Asian American 0% 0% LEIA-Cash Acct IE 0.0 0.0 0.0 0.0% LEIA-Channing IE African American 0% 0% 14.9 13.7 1.1 7.6% American Indian 1% 0% LEIA Denali IE 20.5 19.2 1.3 6.1% 1% LEIA-Foresight IE 17.5 6.7% Asian American 0% 18.8 1.3 LEIA GlobeFlex IE 1.9 8.2% 1% 0% 23.3 21.3 Woman Asian American 0% 0% LEIA-John Hsu IEG 0.0 0.0 0.0 0.0% 0% 0% LEIA-Metis EME 8.7% African American 6.5 5.9 0.6 Subtotal 123.3 114.5 8.8 7.2% **TOTAL - Manager of Managers Program** 354.0 329.3 24.7 7.0%

Current MWDBE Allocation vs. Target MWDBE Allocation

(in millions of dollars)

Reporting for the Period ending January 31, 2019

				T-4-1	Current MWDBE	Target MWDBE	A11
	M	arket Value	Cla	Total ass Assets	Asset Class Allocation	Asset Class Allocation	Allocation Difference
Total Fund Assets	\$	4,443.6	\$	10,246.9	43%	20%	23%
Total Active Assets	\$	2,450.2	\$	6,981.6	35%	25%	10%
Total MWDBE Equity	\$	3,606.1	\$ (6,287.7	57%	30%	27%
Total Minority Equity	\$	1,283.4	\$	6,287.7	20%	25%	-5%
Total Woman Equity	\$	2,322.7	\$	6,287.7	37%	5%	32%
Total Disabled Equity	\$	-	\$	6,287.7	0%	0%	0%
Total MWDBE Fixed Income	\$	701.6	\$2	2,663.3	26%	15%	11%
Total Minority Fixed Income	\$	461.3	\$	2,663.3	17%	12%	5%
Total Woman Fixed Income	\$	240.4	\$	2,663.3	9%	3%	6 %
Total Disabled Fixed Income	\$	=	\$	2,663.3	0%	0%	0%
Total MWDBE Alternatives	\$	137.7	\$ '	1,295.9	11%	10%	1%
Total Minority Alternatives	\$	106.2	\$	1,295.9	8%	10%	-2%
Total Woman Alternatives	\$	5.5	\$	1,295.9	0%	0%	0%
Total Disabled Alternatives	\$	26.0	\$	1,295.9	2%	0%	2%

Note: Percentages may not add up due to rounding

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Illinois Based Investment Managers

(in millions of dollars)

Reporting for the Period ending January 31, 2019

	Market Value	Year End 2017	Year End 2016	Year End 2015
	(Current Month)	rear Liid 2017	Teal Life 2010	rear Life 2015
Adams Strt Many Fd PE	\$168.8	\$142.9	\$124.4	\$112.2
Ariel SCV ^M	\$1.9	0.0	0.0	122.3
Ariel EAFE ILCV ^M	74.3	79.3	70.0	0.0
Attucks Asset Mgmt DE MOM ^M	230.7	244.4	205.2	159.0
Ativo EME ^{IM}	see below	see below	see below	see below
BMO Global-Harris LCV	300.6	321.2	270.8	285.7
BMO Disciplined SCG	39.7	0.0	0.0	0.0
Capri Select Fd II PRE ^M	0.1	0.1	0.1	0.1
Channing US ACE ^M	135.0	145.1	135.1	122.7
Hispania Capital Partners ^M	2.7	3.7	4.5	7.7
Holland LCG ^M	0.0	0.0	251.6	248.0
LaSalle PRE	109.1	105.0	100.1	96.2
Leading Edge IE MOM ^M	n/a	n/a	n/a	n/a
Ativo IE ^{2M}	20.6	22.8	18.5	23.0
Channing IE ^M	14.9	0.0	0.0	0.0
Mesirow	51.2	52.1	74.1	79.6
Muller & Monroe Asset Management ^M	2.3	2.7	12.1	12.9
Newport Capital Fund II	25.9	19.3	12.0	0.0

¹ Ativo EME is a sub-advisor in the Attucks Asset Management Manager-of-Manager program. Attucks and the sub-advisor are located in Chicago. Therefore Ativo's assets are reported as part of Attucks' Total Market Value.

Note: Percentages may not add up due to rounding

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This report is unaudited and intended for informational purposes only.

² Ativo IE and Martin LCC are IL based sub-advisors in a Manager-of-Managers program where the Manager-of-Manager is not IL based. Therefore, the sub-advisors' Market Values are reported separate from the Manager-of-Managers.

M=Minority Manager

Chicago Teachers' Pension Fund Illinois Based Investment Managers

(in millions of dollars)

Reporting for the Period ending January 31, 2019

	Market Value	Year End 2017	Year End 2016	Year End 2015
	(Current Month)	rear Lina 2017	rear Liid 2010	rear End 2015
Northern Trust Corporation	1,221.3	1,468.9	1,932.4	1,960.8
Pluscios Mgmt HFOF ^M	0.0	0.0	19.5	29.6
Progress Invest DE MOM ^M	n/a	n/a	n/a	n/a
Martin LCC ^{2M}	0.0	0.0	0.0	26.5
TCB Broadway ^M	0.0	0.0	0.0	0.0
TCB DV Urban PRE ^M	0.0	1.2	3.0	2.8
Walton Street Capital	22.0	25.0	34.2	40.8
William Blair & Company	736.8	855.0	666.3	699.4
Total	¢2.450.0	¢2.400.7	¢2 022 0	£4.020.2
Total	\$3,158.0	\$3,488.6	\$3,933.9	\$4,029.2
IL Managed Assets as % of Total Fund	31%	32%	40%	41%
IL Minority Managed Assets as % of Total Fund	4%	4%	7%	8%

¹ Ativo EME is a sub-advisor in the Attucks Asset Management Manager-of-Manager program. Attucks and the sub-advisor are located in Chicago. Therefore Ativo's assets are reported as part of Attucks' Total Market Value.

Note: Percentages may not add up due to rounding

² Ativo IE and Martin LCC are IL based sub-advisors in a Manager-of-Managers program where the Manager-of-Manager is not IL based. Therefore, the sub-advisors' Market Values are reported separate from the Manager-of-Managers.

M=Minority Manager

Administrative Expenses 11/1/18 - 11/30/18

VENDOR	DESCRIPTION	1	AMOUNT		
A & E Rubber Stamp	Office Supplies			\$	105.85
AT&T	Monthly Telephone Service, 9/19/18 - 10/18/18			\$	1,973.52
AT & T Mobility	Data Access, 9/25/18 - 10/24/18: Trustees			\$	427.00
ADP Screening & Selection Service	Background Check, New Employees			\$	108.03
Advanced Resources	Temporary Staff, HR, 10/1/18 - 10/7/18	\$	1,998.46		
	Temporary Staff, HR, 10/29/18 - 11/4/18	\$	1,141.98		
	Temporary Staff, HR, 11/5/18 - 11/11/18	\$	1,903.30	\$	5,043.7
	Air, Private Equity/Secondary Investment Summit,			•	,
American Express	10/27/18 - 10/29/18, New York, NY: Miller-May	\$	191.96		
	Hubworks, Call Center Scheduling, 10/1/18 - 10/31/18:	١.			
	Member Services	\$	29.00		
	Parking, Real Estate Investor Forum, 10/17/18, Chicago, IL: Ashford	\$	44.00		
	Trans., Potential Future Office Locations, 10/4/18 & 10/16/18, Chicago, IL: Burbridge	\$	48.75		
	Trans., Open Enrollment Seminar, 10/9/18, Oak Park, IL: Burbridge	\$	146.87		
	Trans., RTAC Luncheon, 10/19/18, Chicago, IL: Burbridge	\$	24.25		
	Trans., CTU Meeting, 10/24/18, Chicago, IL: Burbridge	\$	24.74		
	Trans., Open Enrollment Seminar Walk Thru, 10/3/18, Oak Park, IL: Cavallaro	\$	11.25		
	Trans., Open Enrollment Seminar, 10/9/18, Oak Park, IL: Cavallaro	\$	10.50		
	Trans., Roundtable & Investment Meeting, 10/4/18, Chicago, IL: Miller-May	\$	8.25		
	Trans., Chicago Scholars Forum, 10/23/18, Chicago, IL: Miller-May	\$	23.00		
	Subscription, Financial Times, 10/22/18 - 10/22/19: Burbridge	\$	612.00		
	Subscription, Crain's Chicago Business, 10/23/18 - 10/23/19: Burbridge	\$	119.00		
	Accom., BNY Mellon Bank Meeting, 11/7/18 - 11/9/18, New York, NY: Rooks	\$	284.33		
	Meal, Election Services Meeting, 10/24/18 - 10/25/18, New York, NY: Schroeder	\$	32.74		
	Meal, Institute Investment Women Minority, 9/28/18, New York, NY: Miller-May	\$	9.25		
	Meal, CEO Investment Summit, 9/24/18 - 9/25/18, New York, NY: Miller-May	\$	19.58		
	Air, Election Services Meeting, 11/7/18 - 11/18/18, New York, NY: Bridgmon	\$	166.20		

	Air, BNY Melon Bank Meeting, 11/7/18 - 11/9/18, New	\$	356.62	
	York, NY: Rooks Trans., Election Services Meeting, 10/24/18 - 10/25/18,			
	New York, NY: Schroeder	\$	499.00	
	Amazon Consulting, ERS Website, 9/1/18 - 9/30/18 Intelius, Member Locator Service, 10/1/18 - 10/31/18:	\$	1,074.73 39.90	
	Benefits Constant Contact, Payment Receipt, E-Mail Links, 10/1/18 - 10/31/18	\$	351.23	
	Mail Chimp, Monthly Bulk E-Mail Service, 10/1/18 - 10/31/18	\$	199.00	
	Lunch, Open Enrollment Seminar, 10/9/18, Oak Park, IL	\$	552.89	
	Refreshments, Turning 65 Seminar, 10/23/18 Lunch, Turning 65 Seminar, 10/23/18 Supplies, Postage Machine Lunch, Return to Work Hearing, 9/28/18	\$ \$ \$	107.06 176.58 216.49 124.02	
	Breakfast, Return to Work Committee Meeting, 9/28/18	\$	51.39	
	Lunch, Investment Manager's Meeting, 10/5/18	\$	635.21	
	Refreshments, Investment Manager's Meeting, 10/5/18	\$	13.98	
	Breakfast, Investment Manager's Meeting, 10/5/18	\$	78.00	
	Lunch, Finance & Audit Committee Meeting, 10/8/18	\$	37.06	
	Breakfast, Finance & Audit Committee Meeting, 10/8/18	\$	78.00	
	Lunch, Senate Hearing, 10/16/18 Refreshments, Trustee Meeting, 10/18/18 Lunch, Trustee Meeting, 10/18/18 Breakfast, Trustee Meeting, 10/18/18 Desert, Trustee Meeting, 10/18/18 Lunch, Investment Committee Meeting, 10/25/18	\$ \$ \$ \$ \$	153.57 50.29 662.30 155.75 92.15 66.61	
	Breakfast, Investment Committee Meeting, 10/25/18	\$	132.00	\$ 7,709.50
BNY Mellon	BNY Service Fees, 10/1/18 - 10/31/18			\$ 653.49
Bradley Consulting Group, Inc.	Consulting Services,10/1/18 - 10/31/18			\$ 32,366.25
Bridgmon, Sharena	Reimburse, Election Services Meeting, 11/7/18 - 11/9/18, New York, NY			\$ 346.17
Burbridge, Charles	Reimburse, Meeting, Burbridge and Blackwell, 11/21/18			\$ 30.00
Chicago Messenger Service, Inc.	Delivery Services thru 11/21/18			\$ 1,256.45
Chicago Tribune	Subscription Renewal, 12/10/18 - 6/9/19: Office Use			\$ 149.50

CMM Document Services Coffee Unlimited	Digitizing Microfiche & Jackets, 9/6/18 Water Filtration System, 11/1/18 - 11/30/18	\$	164.75	\$	23,348.03
conee oniinnited	Coffee Supplies	\$	830.00	\$	994.75
Com Ed	Electric Service, 10/3/18 - 10/31/18: Suite 2650	\$	152.84	_	040.50
Comgraphic, Inc.	Electric Service, 10/3/18 - 10/31/18: Suite 2600 Processing, Member Statements, FY2018	\$	665.66 43,723.37	\$	818.50
compragnition in the	Processing, Pension Advices & Checks, October 2018	\$	7,056.84	\$	50,780.21
Concur Technologies, Inc.	Travel Expense Tracker, 11/1/18 - 11/30/18			\$	318.05
Cutting Edge Document	Shredding of Confidential Data			\$	207.00
Destruction	Reimburse, Air, Due Diligence Meeting, 2/2/19 -				
Dickman-Lopez, Robert	2/12/19, Los Angeles, CA			\$	197.96
Digital Deployment, Inc.	Website Consulting, 11/1/18 - 11/30/18			\$	900.00
DirecTV Direct Energy	Satellite Reception, 11/10/18 - 12/9/18 Electric Service, 9/3/18 - 10/2/18: Suite 2600	\$	1,143.35	\$	7.00
Direct Lifergy	Electric Service, 3/3/18 - 10/2/18. Suite 2000		1,141.56	\$	2,284.91
Election Services Corporation	Partial Billing, Teacher/Trustee Election, 11/9/18		-	\$	110,796.67
Fuse, LLC.	Newsletter, Fall 2018	Ś	15,319.53		
	Open Enrollment Handbooks		32,826.28	\$	48,145.81
Gabriel, Roeder, Smith & Company	Actuarial Services, 10/1/18 - 10/31/18			\$	20,695.00
Garvey's Office Products	Office Supplies	\$	1,478.81		
	Trustee Supplies	\$	130.80	\$	1,609.61
Goldstine, Skrodski, Russian, Nemec & Hoff, Ltd.	Legal Services, Return to Work Hearing, 9/19/18 - 9/30/18	\$	2,275.00		
	Legal Services, Return to Work Hearing, 10/1/18 - 10/17/18	\$	3,500.00	\$	5,775.00
Hilton Oak Lawn	Bal Due, Open Enrollment, 10/11/18			\$	4,976.60
Hinckley Springs	Bottled Water			\$	16.06
Holleman, Michelle Ice Miller, LLP.	Monthly Consulting, 10/1/18 - 10/31/18 Legal, Litigation, 9/1/18 - 9/30/18	\$	51.27	\$	13,645.00
ice willer, ELF.	Legal, Litigation, 3/1/18 - 3/30/18 Legal, Litigation, 10/1/18 - 10/31/18	\$	114.69	\$	165.96
International Business Machines Corp.	Data Vault Backup Services, 10/01/18 - 10/31/18	\$	2,615.00		
Widefilles corp.	Business Continuity Service, 11/17/18 - 12/16/18	\$	2,387.07	\$	5,002.07
Iron Mountain	Computer Daily Backup Storage Charges, 10/1/18 - 10/31/18			\$	849.34
Kelsen, Andrew	Reimburse, ILPA Palladium Meeting, 11/5/18 - 11/9/18, New York, NY			\$	593.29
LexisNexis	Member Information Search, 10/1/18 - 10/31/18			\$	330.63
LogMeIn USA, Inc.	CTPF Webinars, 11/2/18 - 12/1/18			\$	517.20
Moody, Lateef	Reimburse, Field Services, 11/16/18, Chicago, IL			\$	24.58
Plante Moran, PLLC. Red Hawk	Services Rendered, External Audit, FY2018 Annual Security Agreement, 7/8/18 - 7/7/19			\$ \$	65,200.00 330.16
neu Hawk	Annual Security Agreement, 1/0/10 - 1/1/13	I		ڔ	330.10

Romay Corp.	Transcription Tape, Return to Work Hearing, 9/28/18		\$	727.70
Rooks, Cheryl	Reimburse, BNY Meeting, 11/7/18 - 11/8/18, Pittsburgh, PA		\$	218.75
Segal Company	Health Insurance Consulting, Employer Group Waiver Plan RFP, 8/2/18 - 9/5/18		\$	5,358.75
Sentinel Technologies, Inc.	Managed Service Agreement, 9/1/18 - 9/30/18	\$ 2,024.00		
Solomon Cloud Solutions Staples	Managed Service Agreement, 10/1/18 - 10/31/18 Managed Service Agreement, 11/1/18 - 11/30/18 Renewal, Smartnet Software, 10/25/18 - 10/24/19 Consulting Service, Finance, 9/27/18 Consulting Service, Finance, 10/12/18 Consulting Service, Finance, 11/9/18 Office supplies	\$ 2,024.00 \$ 2,059.20 \$ 20,209.00 \$ 166.50 \$ 55.50 \$ 111.00	_	26,316.20 333.00 95.59
Staff Salary - CTPF	Office Salary for November 2018		\$	936,081.06
Sun Life Assurance Company of Canada	Employee Benefit, Staff, 11/1/18 - 11/30/18		\$	4,238.99
Sword & Shield Enterprise Security	Security Consulting, 9/30/18	\$ 1,150.00		
Unishippers USPO Chicago 1, LLC.	Security Consulting, 10/1/18 - 10/31/18 Security Consulting, 11/1/18 - 11/30/18 Delivery Services thru 11/2/18 Rent, 11/1/18 - 11/30/18	\$ 3,700.00 \$ 3,700.00 \$ 55,146.33	\$ \$	8,550.00 160.47
	Operating Expenses, 11/1/18 - 11/30/18 Tenant Services, 10/1/18 - 10/31/18	\$ 37,578.00 \$ 1,005.14	\$	93,729.47
Vega, Cecilia	Reimburse, Election Services Meeting, 11/7/18 - 11/9/18, New York, NY		\$	185.96
Verizon Vision Mai, LLC. Workplace Solutions	Monthly Internet Service, 11/1/18 - 110/30/18 Legislative Consulting, 11/1/18 - 11/30/18 EAP Assistance, Staff, 11/1/18 - 11/30/18		\$ \$ \$	1,216.70 6,750.00 300.44
Zahn Governmental Solutions, LLC.	Legislative Consulting, 10/1/18 - 10/31/18		\$	5,000.00
PHYSICIANS, DISABILITY APPLICANTS				
Access Medical Evaluations	Eval & Report, H.Y. by Dr. Chien Eval & Report, K.C. by Dr. Upadhyay Eval & Report, K.C. by Dr. Chien Eval & Report, A.D. by Dr. Menner Eval & Report, A.D. by Dr. Menner Eval & Report, K. C. by Dr. Upadhyay Eval & Report, K.C. by Dr. Chien Eval & Report, S.M. by Dr. Chien Eval & Report S.M. by Dr. Upadhyay	\$ 800.00 \$ 800.00 \$ 800.00 \$ 800.00 \$ 800.00 \$ 800.00 \$ 800.00 \$ 800.00		

	Eval & Report, M.S. by Dr. Chien	\$ 800.00			
	Eval & Report, M.S. by Dr. Upadhyay	\$ 800.00			
Record Copy Services	Medical Records, M.F. by Dr. Bonk	\$ 179.25			
	Medical Records, K.C. by Dr. Cherchi	\$ 107.75			
	Medical Records, T.D. by Dr. La Cava	\$ 169.75			
	Medical Records, C.H. by Dr. Berstein	\$ 639.55			
	Medical Records, M.F. by Advocate Christ Hospital	\$ 79.75			
	Medical Records, C.H. by Dr. Hufmeyer	\$ 89.75			
	Medical Records, S.V. by Dr. Linde	\$ 69.75			
	Medical Records, S.V. by Dr. Troy	\$ 128.75			
	Medical Records, S.V. by Dr. Burda	\$ 128.75			
	Medical Records, S.V. by Mr. Ploum, Counselor	\$ 126.75			
	Medical Records, S.V. by DuPage Medical Group	\$ 149.75			
	Medical Records, S.V. by Advocate Christ Hospital	\$ 29.75			
	Medical Records, M.F. by Dr. Zalzaleh	\$ 248.50			
	Medical Records, K.C. by Dr. Hufmeyer	\$ 131.25			ļ
	Medical Records, K.E. by University of Chicago Hospitals	\$ 69.75			
	Medical Records, K.E. by St. Margaret Mercy Healthcare	\$ 79.75			
	Medical Records, K.E. by Rush Medical Center	\$ 79.75			
	Medical Records, K.E. by Metro South Medical Center	\$ 337.75			
	Medical Records, A.B. by Dr. Taher	\$ 147.75			
	Medical Records, A.B. by Dr. Micco	\$ 113.75			
	Medical Records, T.J. by Dr. James	\$ 89.75			
	Medical Records, T.J. by Dr. Sunbulli	\$ 89.75			
	Medical Records, V.L. by Dr. Rae	\$ 129.75			
	Medical Records, T.F. by Dr. La Cava	\$ 29.75			
	Medical Records, K.C. by Dr. Yoo	\$ 69.75			
	Medical Records, K.E. by Little Company of Mary Hospital	\$ 153.75	\$	12,470.05	5
	Trospital		Υ	12, 17 0.00	_

\$ 1,510,432.02

Administrative Expenses 12/1/18 - 12/31/18

VENDOR	DESCRIPTION	А	MOUNT	
A & E Rubber Stamp	Office Supplies			\$ 19.50
AT&T	Monthly Telephone Service, 10/19/18 - 11/18/18			\$ 1,892.83
AT & T Mobility	Data Access, 10/25/18 - 11/24/18: Trustees			\$ 217.00
ADP Screening & Selection				
Service	Background Checks, New Employees			\$ 98.66
Advanced Resources	Temporary Staff, HR, 11/12/18 - 11/18/18	\$	1,549.83	
	Temporary Staff, HR, 11/19/18 - 11/25/18	\$	1,114.79	
	Temporary Staff, HR, 11/26/18 - 12/2/18	\$	1,930.49	
	Temporary Staff, HR 12/3/18 - 12/9/18	\$	1,821.73	
	Temporary Staff, HR 12/10/18 - 12/16/18	\$	1,903.30	\$ 8,320.14
Allan Visual Systems	Board Room Power Amplifier			\$ 1,995.00
Alper Services, LLC.	HR Consulting Service, 9/26/18 - 9/26/19			\$ 3,150.00
	Accom., ILPA Conf. & Palladium Meeting, 11/5/18 -			
American Express	11/8/18, New York, NY: Kelsen	\$	1,349.63	
	Accom., Private Equity & Secondary Investment Summit,			
	11/27/18 - 11/29/18, New York, NY: Miller-May	\$	683.11	
	Meal, Private Equity & Secondary Investment Summit,			
	11/27/18 - 11/29/18, New York, NY: Miller-May	\$	26.53	
	Educational Training Book Material: Burbridge	\$	26.76	
	Hubworks, Call Center Scheduling, 11/1/18 - 11/31/18:			
	Member Services	\$	29.00	
	Educational Training Book Material for IT	\$	218.14	
	Trans., Private Equity & Secondary Investment Summit,			
	11/27/18 - 11/29/18, New York, NY: Miller-May	\$	30.75	
	Membership Dues, NAPPA, 1/1/19 - 12/31/19: Hurtado Membership Dues, NAPPA, 1/1/19 - 12/31/19:	\$	300.00	
	Schomberg	\$	300.00	
	Membership Dues, Attorney Registration & Disciplinary			
	Commission, 1/1/19 - 12/31/19: Schomberg	\$	393.47	
	Office Supplies	\$	21.70	
	Staff Condolences, 11/5	\$	98.93	
	Accom., Election Services, 11/7/18 - 11/8/18, New York,			
	NY: Vega	\$	195.34	
	Air, Election Services, 11/7/18 - 11/8/18, New York, NY: Bridgmon	\$	378.96	
	Trans., Election Services, 11/7/18 - 11/8/18, New York,	۶	378.30	
	NY: Vega, Bridgmon	\$	148.75	

Amazon Consulting, ERS Website, 10/1/18 - 10/31/18 1ntelius, Member Locator Service, 11/1/18 - 11/30/18: Benefits 5 119.65	1					
Benefits			\$	1,143.39		
Mail Chimp, Bulk E-Mail Service, 11/1/18 - 11/30/18			\$	119.65		
Mail Chimp, Bulk E-Mail Service, 11/1/18 - 11/30/18			۰	272.52		
Trustee Supplies Lunch, Investment Manager's Meeting, 11/2/18 \$ 39.44 \$ 302.46		11/30/18	\$	373.53		
Lunch, Investment Manager's Meeting, 11/2/18 \$ 302.46						
Breakfast, Investment Manager's Meeting, 11/2/18 \$ 156.94 SPEAKfast, Technical Committee Meeting, 11/8/18 \$ 78.00 Lunch, Technical Committee Meeting, 11/8/18 \$ 187.03 Breakfast, Trustee Meeting, 11/13/18 \$ 224.09 Lunch, Trustee Meeting, 11/13/18 S 13.67 S 7,672.27 Lunch, Trustee Meeting, 11/16/18 - Lunch, Trustee Meeting, 11/18 - Lunch, Trustee, Lunch, Lunch, Trustee, Lunch,				39.44		
Breakfast, Technical Committee Meeting, 11/8/18 \$ 78.00		Lunch, Investment Manager's Meeting, 11/2/18	\$	302.46		
Lunch, Technical Committee Meeting, 11/8/18 S 187.03 S 224.09 S 240.09 S 484.00 S 484.0				156.94		
Breakfast, Trustee Meeting, 11/13/18		Breakfast, Technical Committee Meeting, 11/8/18		78.00		
Lunch, Trustee Meeting, 11/13/18		Lunch, Technical Committee Meeting, 11/8/18	\$	187.03		
Refreshments, Trustee Meeting, 11/13/18 S 13.67 S 7,672.27 Digitizing of Microfilm & Microfiche, 11/16/18 - 12/15/18 S 510.00 Ashford, Lois Baker, Tilly, Virchow, Krause, LLP.		Breakfast, Trustee Meeting, 11/13/18	\$	224.09		
Arhat 12/15/18 \$ 510.00 Ashford, Lois Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 \$ 200.00 Blackwell, Jeffery Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 \$ 5,010.00 Blackwell, Jeffery Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 \$ 5,010.00 BNY Mellon BNY Service Fee, 11/1/18 - 11/30/18 \$ 250.00 Bradley Consulting Group, Inc. Consulting Service, 11/1/18 - 11/30/18 \$ 31,286.25 Bures, Robert Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 \$ 25.00 Bures, Robert Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 \$ 25.00 Carvallero, James Chicago Messenger Service, 11/19/2018 \$ 10,050.00 Cavallero, James Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 \$ 75.00 Clay, Gervaise Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 \$ 75.00 Clay, Gervaise Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 \$ 50.00 Coffee Unlimited Water Filtration System, 12/11/8 - 12/31/18 \$ 164.75 Coffee Supplies \$ 934.23 \$ 1,098.98 Com Ed Electric Service, 11/1/18-12/3/18: Suite 2600 \$ 5674.09 Electric Service, 10/31/18 - 12/31/18 Suite 2650 \$ 164.17 \$ 838.26 Concur Technologies, Inc. Cutting Edge Document Reimburse, Trans., Due Diligence Meeting, 12/3/18, Dickman-Lopez, Robert Philadelphia, PA \$ 153.45		Lunch, Trustee Meeting, 11/13/18	\$	484.00		
Arhat 12/15/18 \$ 510.00 Ashford, Lois Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 \$ 200.00 Blackwell, Jeffery Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 \$ 5,010.00 Blackwell, Jeffery Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 \$ 5,010.00 BNY Mellon BNY Service Fee, 11/1/18 - 11/30/18 \$ 250.00 Bradley Consulting Group, Inc. Consulting Service, 11/1/18 - 11/30/18 \$ 31,286.25 Bures, Robert Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 \$ 25.00 Bures, Robert Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 \$ 25.00 Carvallero, James Chicago Messenger Service, 11/19/2018 \$ 10,050.00 Cavallero, James Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 \$ 75.00 Clay, Gervaise Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 \$ 75.00 Clay, Gervaise Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 \$ 50.00 Coffee Unlimited Water Filtration System, 12/11/8 - 12/31/18 \$ 164.75 Coffee Supplies \$ 934.23 \$ 1,098.98 Com Ed Electric Service, 11/1/18-12/3/18: Suite 2600 \$ 5674.09 Electric Service, 10/31/18 - 12/31/18 Suite 2650 \$ 164.17 \$ 838.26 Concur Technologies, Inc. Cutting Edge Document Reimburse, Trans., Due Diligence Meeting, 12/3/18, Dickman-Lopez, Robert Philadelphia, PA \$ 153.45		_	\$	13.67	\$	7,672.27
Ashford, Lois Baker, Tilly, Virchow, Krause, ILP. Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 Blackwell, Jeffery Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 BNY Service Fee, 11/1/18 - 11/30/18 BNY Service Fee, 11/1/18 - 11/30/18 Bradley Consulting Group, Inc. Consulting Service, 11/1/18 - 11/30/18 Bradley Consulting Group, Inc. Consulting Service, 11/1/18 - 11/30/18 Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 Pension Representative Stipend, Teacher/Trustee Election, 11/9/2018 Cavallero, James Chicago Messenger Service, Inc. Delivery Service thru 12/14/18 Coffee Unlimited Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 Coffee Unlimited Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 Coffee Supplies Com Ed Electric Service, 11/1/18-12/31/18: Suite 2600 Electric Service, 10/31/18 - 12/31/18: Suite 2650 Travel Expense Tracker, 12/1/18 - 12/31/18 Shredding of Confidential Data Reimburse, Trans., Due Diligence Meeting, 12/3/18, Dickman-Lopez, Robert Professional Services, Census data AUP, 8/22/18 - 11/2/31/18, Sonotone Sonoton						ŕ
Baker, Tilly, Virchow, Krause, LLP. Professional Services, Census data AUP, 8/22/18 - 11/27/18 Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 BNY Service Fee, 11/1/18 - 11/30/18 BNY Service Fee, 11/1/18 - 11/30/18 Bradley Consulting Group, Inc. Consulting Service, 11/1/18 - 11/30/18 Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 Pension Representative Stipend, Teacher/Trustee Canvassing Board Cavallero, James Chicago Messenger Service, Inc. Delivery Service thru 12/14/18 Coffee Unlimited Water Filtration System, 12/1/18 - 12/31/18 Coffee Supplies Com Ed Electric Service, 10/31/18 - 12/31/18 Suite 2600 Electric Service, 10/31/18 - 12/31/18 Concur Technologies, Inc. Cutting Edge Document Professional Services, Census data AUP, 8/22/18 - 12/31/18 \$ 5,010.00 \$ 5,010.00 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 6,74.09 Electric Service, 10/31/18 - 12/3/18: Suite 2600 Electric Service, 10/31/18 - 12/31/18 Concur Technologies, Inc. Conting Edge Document Shredding of Confidential Data Reimburse, Trans., Due Diligence Meeting, 12/3/18, Philadelphia, PA Professional Service, 10/1/18 - 12/31/18, Shouting Edge Document Professional Service, 10/1/18 - 12/31/18, Shout 1,134.59 Sh	Arhat				\$	510.00
Baker, Tilly, Virchow, Krause, LLP. Professional Services, Census data AUP, 8/22/18 - 11/27/18 Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 BNY Service Fee, 11/1/18 - 11/30/18 BNY Service Fee, 11/1/18 - 11/30/18 Bradley Consulting Group, Inc. Consulting Service, 11/1/18 - 11/30/18 Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 Pension Representative Stipend, Teacher/Trustee Canvassing Board Cavallero, James Chicago Messenger Service, Inc. Delivery Service thru 12/14/18 Coffee Unlimited Water Filtration System, 12/1/18 - 12/31/18 Coffee Supplies Com Ed Electric Service, 10/31/18 - 12/31/18 Suite 2600 Electric Service, 10/31/18 - 12/31/18 Concur Technologies, Inc. Cutting Edge Document Professional Services, Census data AUP, 8/22/18 - 12/31/18 \$ 5,010.00 \$ 5,010.00 \$ 5,000 \$ 5,000 \$ 5,000 \$ 5,000 \$ 6,74.09 Electric Service, 10/31/18 - 12/3/18: Suite 2600 Electric Service, 10/31/18 - 12/31/18 Concur Technologies, Inc. Conting Edge Document Shredding of Confidential Data Reimburse, Trans., Due Diligence Meeting, 12/3/18, Philadelphia, PA Professional Service, 10/1/18 - 12/31/18, Shouting Edge Document Professional Service, 10/1/18 - 12/31/18, Shout 1,134.59 Sh	Ashford, Lois	Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18			\$	200.00
LLP.					•	
Blackwell, Jeffery BNY Mellon BNY Service Fee, 11/1/18 - 11/30/18 \$ 250.00 BNY Mellon BNY Service Fee, 11/1/18 - 11/30/18 \$ 1,134.59 Bradley Consulting Group, Inc. Consulting Service, 11/1/18 - 11/30/18 \$ 31,286.25 Bures, Robert Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 \$ 25.00 Pension Representative Stipend, Teacher/Trustee Canvassing Board Election, 11/9/2018 \$ 10,050.00 Cavallero, James Chicago Messenger Service, Inc. Delivery Service thru 12/14/18 \$ 75.00 Clay, Gervaise Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 \$ 75.00 Clay, Gervaise Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 \$ 50.00 Coffee Unlimited Water Filtration System, 12/1/18 - 12/31/18 \$ 50.00 Electric Service, 11/1/18-12/31/18: Suite 2600 \$ 934.23 \$ 1,098.98 Electric Service, 10/31/18 - 12/3/18: Suite 2650 \$ 674.09 \$ 164.17 \$ 838.26 Concur Technologies, Inc. Travel Expense Tracker, 12/1/18 - 12/31/18 \$ 318.05 Cutting Edge Document Shredding of Confidential Data Reimburse, Trans., Due Diligence Meeting, 12/3/18, Philadelphia, PA \$ 153.45					\$	5,010.00
BNY Mellon BNY Service Fee, 11/1/18 - 11/30/18 Bradley Consulting Group, Inc. Consulting Service, 11/1/18 - 11/30/18 Bures, Robert Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 Pension Representative Stipend, Teacher/Trustee Canvassing Board Cavallero, James Chicago Messenger Service, Inc. Delivery Service thru 12/14/18 Coffee Unlimited Water Filtration System, 12/1/18 - 12/31/18 Coffee Supplies Com Ed Electric Service, 11/1/18-12/3/18: Suite 2600 Electric Service, 10/31/18 - 12/31/18 Concur Technologies, Inc. Cutting Edge Document BNY Service Fee, 11/1/18 - 11/30/18 \$ 1,134.59 \$ 31,286.25 \$ 10,050.00 \$ 10,050.00 \$ 75.00 \$ 252.67 \$ 50.00 \$					•	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Bradley Consulting Group, Inc. Consulting Service, 11/1/18 - 11/30/18 Bures, Robert Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 Pension Representative Stipend, Teacher/Trustee Canvassing Board Cavallero, James Chicago Messenger Service, Inc. Delivery Service thru 12/14/18 Coffee Unlimited Water Filtration System, 12/1/18 - 12/31/18 Coffee Supplies Com Ed Electric Service, 11/1/18-12/3/18: Suite 2600 Electric Service, 10/31/18 - 12/31/18 Concur Technologies, Inc. Cutting Edge Document Consulting Service, 11/1/18-11/30/18 \$ 31,286.25 \$ 25.00 \$ 10,050.00 \$ 75.00 \$ 252.67 \$ 50.00 \$ 50.00 \$ 50.00 \$ 50.00 \$ 674.09 Electric Service, 11/1/18-12/3/18: Suite 2600 Electric Service, 10/31/18 - 12/31/18 Sincedding of Confidential Data Reimburse, Trans., Due Diligence Meeting, 12/3/18, Dickman-Lopez, Robert Philadelphia, PA \$ 31,286.25	Blackwell, Jeffery	Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18				250.00
Bures, Robert Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 \$ 25.00 Pension Representative Stipend, Teacher/Trustee Election, 11/9/2018 \$ 10,050.00 Cavallero, James Chicago Messenger Service, Inc. Pelivery Service thru 12/14/18 \$ 75.00 Clay, Gervaise Coffee Unlimited Water Filtration System, 12/1/18 - 12/31/18 \$ 50.00 Coffee Supplies \$ 934.23 \$ 1,098.98 Com Ed Electric Service, 11/1/18-12/3/18: Suite 2600 \$ 674.09 Electric Service, 10/31/18 - 12/31/18 \$ 318.05 Concur Technologies, Inc. Travel Expense Tracker, 12/1/18 - 12/31/18 Cutting Edge Document Shredding of Confidential Data Reimburse, Trans., Due Diligence Meeting, 12/3/18, Dickman-Lopez, Robert Philadelphia, PA \$ 153.45	BNY Mellon	BNY Service Fee, 11/1/18 - 11/30/18			\$	1,134.59
Pension Representative Stipend, Teacher/Trustee Election, 11/9/2018 \$ 10,050.00 Cavallero, James Chicago Messenger Service, Inc. Delivery Service thru 12/14/18 \$ 75.00 Clay, Gervaise Coffee Unlimited Water Filtration System, 12/1/18 - 12/31/18 Come Ed Electric Service, 11/1/18-12/3/18: Suite 2600 Electric Service, 10/31/18 - 12/31/18 Concur Technologies, Inc. Cutting Edge Document Trans., Due Diligence Meeting, 12/3/18, Dickman-Lopez, Robert Philadelphia, PA Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 \$ 50.00 \$ 50	Bradley Consulting Group, Inc.	Consulting Service, 11/1/18 - 11/30/18			\$	31,286.25
Canvassing Board Election, 11/9/2018 Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 Chicago Messenger Service, Inc. Delivery Service thru 12/14/18 Clay, Gervaise Coffee Unlimited Water Filtration System, 12/1/18 - 12/31/18 Coffee Supplies Com Ed Electric Service, 11/1/18-12/3/18: Suite 2600 Electric Service, 10/31/18 - 12/3/18: Suite 2650 Concur Technologies, Inc. Cutting Edge Document Canvassing Board Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 \$ 50.00 \$ 50.00 \$ 674.09 Electric Service, 10/31/18 - 12/3/18: Suite 2650 Travel Expense Tracker, 12/1/18 - 12/31/18 \$ 318.05 Cutting Edge Document Philadelphia, PA \$ 153.45	Bures, Robert				\$	25.00
Cavallero, James Chicago Messenger Service, Inc. Delivery Service thru 12/14/18 \$ 75.00 Clay, Gervaise Coffee Unlimited Water Filtration System, 12/1/18 - 12/31/18 Coffee Supplies Electric Service, 11/1/18-12/3/18: Suite 2600 Electric Service, 10/31/18 - 12/31/18 Concur Technologies, Inc. Cutting Edge Document Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 \$ 50.00 \$ 164.75 \$ 934.23 \$ 1,098.98 Concur Technologies, Inc. Travel Expense Tracker, 12/1/18 - 12/31/18 Shredding of Confidential Data Reimburse, Trans., Due Diligence Meeting, 12/3/18, Dickman-Lopez, Robert Philadelphia, PA \$ 153.45						
Chicago Messenger Service, Inc. Delivery Service thru 12/14/18 Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 Coffee Unlimited Water Filtration System, 12/1/18 - 12/31/18 Coffee Supplies Com Ed Electric Service, 11/1/18-12/3/18: Suite 2600 Electric Service, 10/31/18 - 12/3/18: Suite 2650 Concur Technologies, Inc. Travel Expense Tracker, 12/1/18 - 12/31/18 Shredding of Confidential Data Reimburse, Trans., Due Diligence Meeting, 12/3/18, Dickman-Lopez, Robert Delivery Service thru 12/14/18 \$ 252.67 \$ 50.00 \$ 164.75 \$ 1,098.98 \$ 338.26 \$ 34.23 \$ 1,098.98 \$ 34.23 \$ 1,098.98 \$ 34.23 \$ 1,098.98 \$ 34.23 \$ 1,098.98 \$ 153.45	Canvassing Board	Election, 11/9/2018			Ş	10,050.00
Inc. Delivery Service thru 12/14/18 Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 Coffee Unlimited Water Filtration System, 12/1/18 - 12/31/18 Coffee Supplies Electric Service, 11/1/18-12/3/18: Suite 2600 Electric Service, 10/31/18 - 12/3/18: Suite 2650 Concur Technologies, Inc. Travel Expense Tracker, 12/1/18 - 12/31/18 Shredding of Confidential Data Reimburse, Trans., Due Diligence Meeting, 12/3/18, Dickman-Lopez, Robert Philadelphia, PA \$ 252.67 \$ 50.00 \$ 164.75 \$ 164.75 \$ 838.26 \$ 674.09 \$ 164.17 \$ 838.26 \$ 318.05 \$ 115.00 \$ 115.00		Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18			\$	75.00
Clay, Gervaise Coffee Unlimited Water Filtration System, 12/1/18 - 12/31/18 Coffee Supplies Com Ed Electric Service, 11/1/18-12/3/18: Suite 2600 Electric Service, 10/31/18 - 12/3/18: Suite 2650 Concur Technologies, Inc. Cutting Edge Document Shredding of Confidential Data Reimburse, Trans., Due Diligence Meeting, 12/3/18, Dickman-Lopez, Robert Reimburse, Travel Expense, 10/1/18 - 12/3/18, Shredding of Confidential Data Reimburse, Trans., Due Diligence Meeting, 12/3/18, \$ 50.00 \$ 164.75 \$ 1,098.98 674.09 \$ 318.05 \$ 318.05 \$ 115.00 \$ 115.00	I	D II				252.67
Coffee Unlimited Water Filtration System, 12/1/18 - 12/31/18 Coffee Supplies Spandurable Spandurabl	Inc.	Delivery Service thru 12/14/18			\$	252.67
Com Ed Electric Service, 11/1/18-12/3/18: Suite 2600 \$ 674.09 Electric Service, 10/31/18 - 12/3/18: Suite 2650 \$ 164.17 \$ 838.26 Concur Technologies, Inc. Travel Expense Tracker, 12/1/18 - 12/31/18 \$ 115.00 Cutting Edge Document Shredding of Confidential Data Reimburse, Trans., Due Diligence Meeting, 12/3/18, Dickman-Lopez, Robert Philadelphia, PA \$ 153.45	-				\$	50.00
Com Ed Electric Service, 11/1/18-12/3/18: Suite 2600 \$ 674.09 Electric Service, 10/31/18 - 12/3/18: Suite 2650 \$ 164.17 \$ 838.26 Concur Technologies, Inc. Travel Expense Tracker, 12/1/18 - 12/31/18 \$ 318.05 Cutting Edge Document Shredding of Confidential Data \$ 115.00 Reimburse, Trans., Due Diligence Meeting, 12/3/18, Dickman-Lopez, Robert Philadelphia, PA \$ 153.45	Coffee Unlimited			164.75		
Electric Service, 10/31/18 - 12/3/18: Suite 2650 \$ 164.17 \$ 838.26 Concur Technologies, Inc. Cutting Edge Document Shredding of Confidential Data Reimburse, Trans., Due Diligence Meeting, 12/3/18, Dickman-Lopez, Robert Philadelphia, PA Electric Service, 10/31/18 - 12/3/18: Suite 2650 \$ 164.17 \$ 318.05 318.05 \$ 115.00		Coffee Supplies		934.23	\$	1,098.98
Concur Technologies, Inc. Cutting Edge Document Shredding of Confidential Data Reimburse, Trans., Due Diligence Meeting, 12/3/18, Dickman-Lopez, Robert Travel Expense Tracker, 12/1/18 - 12/31/18 \$ 318.05 \$ 115.00 \$ 115.00	Com Ed	Electric Service, 11/1/18-12/3/18: Suite 2600	\$	674.09		
Concur Technologies, Inc. Cutting Edge Document Shredding of Confidential Data Reimburse, Trans., Due Diligence Meeting, 12/3/18, Dickman-Lopez, Robert Travel Expense Tracker, 12/1/18 - 12/31/18 \$ 318.05 \$ 115.00 \$ 115.00		Electric Service, 10/31/18 - 12/3/18: Suite 2650	\$	164.17	\$	838.26
Cutting Edge Document Shredding of Confidential Data Reimburse, Trans., Due Diligence Meeting, 12/3/18, Dickman-Lopez, Robert Shredding of Confidential Data \$ 115.00 \$ 153.45	Concur Technologies, Inc.	Travel Expense Tracker, 12/1/18 - 12/31/18			\$	318.05
Reimburse, Trans., Due Diligence Meeting, 12/3/18, Dickman-Lopez, Robert Philadelphia, PA \$ 153.45	Cutting Edge Document	Shredding of Confidential Data				115.00
Dickman-Lopez, Robert Philadelphia, PA \$ 153.45		=				
	Dickman-Lopez, Robert				\$	153.45
	- I					

Direct Energy	Electric Service, 11/1/18 - 12/2/18: Suite 2600		\$	1,172.10
Election Services Corporation Emcor Services Team	Final Billing, Teacher/Trustee Election, 11/9/18		\$	26,441.12
Mechanical	HVAC Maintenance, 7/1/18 - 9/30/18	\$ 791.25		
ivieciiailicai	HVAC Maintenance, 10/1/18 - 9/30/18	\$ 791.25		
	Service Call, Server Room, 11/29/18	\$ 2,080.00	ċ	3,662.50
Foster Pepper, PLLC.	Legal Services, Investments, 8/1/18 - 8/31/18	\$ 10,285.00	ب	3,002.30
l oster repper, rece.	Legal Services, Investments, 9/1/18 - 9/30/18	\$ 10,283.00		
	Legal Services, Investments, 9/1/18 - 9/30/18 Legal Services, Investments, 10/1/18 - 10/31/18	\$ 19,330.00		
	_		۲	47 672 50
	Legal Services, Investments, 11/1/18 - 11/30/18	\$ 12,955.00	Þ	47,672.50
Furlong, Mark	Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18		\$	50.00
Gabriel, Roeder, Smith & Co.	Actuarial Services, 11/1/18 - 11/30/18		\$	7,580.00
Garvey's Office Products	Office Supplies	\$ 760.13		
	Trustee Supplies	\$ 218.48	\$	978.61
Hinckley Springs	Bottled Water		\$	3.99
Holleman, Michelle	Monthly Consulting, 11/1/18 - 11/30/18		\$	9,375.00
Ice Miller	Legal Services, Litigation, 11/1/18 - 11/30/18		\$	72.86
Institutional Limited Partners				
Association	Membership Dues, 1/1/19 - 12/31/19		\$	4,000.00
International Foundation for				
Employee Membership				
Department	Membership Dues, 1/1/19 - 12/31/19		\$	1,635.00
Int'l Business Machines Corp.	Data Vault Backup Service, 11/1/18 - 11/30/18	\$ 2,387.07		
mer Business Muchines Corp.	Disaster Recovery Service, 12/17/18 - 1/16/19	\$ 2,615.00	\$	5,002.07
IPPFA	Membership Dues, 1/1/19 - 12/31/19	ψ 2,013.00	\$	795.00
	Computer Daily Backup Storage Charges, 11/1/18 -		Ψ	755.00
Iron Mountain	11/30/18		\$	767.28
Jacobs, Burns, Orlove &	11, 50, 15		Ψ	707.20
Hernandez	Legal Services, Litigation 8/1/18 - 8/31/18	\$ 27,558.74		
nemandez	Legal Services, General, 8/1/18 - 8/31/18	\$ 12,091.63		
	Legal Services, Litigation, 9/1/18 - 9/30/18	\$ 44,337.42		
	Legal Services, General, 9/1/18 - 9/30/18	\$ 44,300.45	\$	128,288.24
Lexis Nexis	Member Information Search, 11/1/18 - 11/30/18	7 44,500.45	\$	330.63
LEXIS IVEXIS	Tip Tip		Ţ	330.03
Lifestart Wellness Network	Initiation Fee		\$	250.00
LogMeIn USA, Inc.	CTPF Webinars, 12/2/18 - 1/1/19		\$	517.20
Midco, Inc.	Security Software Upgrade		\$	3,538.65
National Association for Public				
Health Statistics	Death Audit Searches, 11/1/18 - 11/30/18		\$	2,000.00
National Conformes on Bublic				
National Conference on Public				

National Council on Teacher	I			I
Retirement	Membership Dues, 1/1/19 - 12/31/19		\$	5,030.00
Nelson, Lois North Shore Printers, Inc.	Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 Business Cards		\$ \$	200.00 569.00
Padilla, Tina Partners By Design Pension Real Estate Assoc. Plante Moran, PLLC.	Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 Professional Design Services, 10/1/18 - 10/31/18 Professional Design Services, 11/1/18 - 11/30/18 Membership Dues, 1/1/19 - 12/31/19 Services Rendered, External Audit, FY18	\$ 7,246.98 \$ 1,613.09 \$ 18,000.00	\$ \$ \$	225.00 8,860.07 330.00
	Services Rendered, Census Attestation, GASB 75	\$ 15,600.00		
	Professional Services, Internal Audit, thru 11/20/18	\$ 7,200.00		
	Professional Services, Internal Audit, thru 12/18/18	\$ 12,300.00	\$	53,100.00
Price-Ward, Jacquelyn	Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18		\$	50.00
Redfeairn, Gregory Reed Smith, LLP.	Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 Legal Tax Services, thru 12/17/18		\$ \$	175.00 118.50
Rehak, Jay C.	Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18		\$	175.00
Reilly, Mary Sharon	Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18		\$	300.00
Rodriguez, Maria J.	Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18		\$	300.00
Sentinel Technologies, Inc. SHI International Corp.	Managed Service Agreement, 12/1/18 - 12/31/18 IP Phones	\$ 2,538.16	\$	2,191.20
	Computer Equipment Apple iPad Accessories	\$ 60.16 \$ 504.00	\$	3,102.32
Sikich, LLP. Staff Salary - CTPF Sun Life Assurance Company	Micro Dynamics, Advantage Plan, 2/13/19 - 2/12/20 Laser Check Enhancement Plan, 2/19/19 - 2/18/20 Office Salary for December 2018	\$ 7,463.60 \$ 216.00	\$ \$	7,679.60 621,983.33
of Canada	Life Insurance, 12/1/18 - 12/31/18: Staff		\$	4,319.44
Sword & Shield Enterprise Security	Security Consulting 12/1/18 - 12/31/18		\$	3,700.00
Travlos, Jerry Unishippers USPO Chicago 1, LLC.	Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 Delivery Service thru 12/12/18 Rent, 12/1/18 - 12/31/18	\$ 55,146.33	\$ \$	50.00 160.22
Verizon	Operating Expenses, 12/1/18 - 12/31/18 Tenant Services, 11/1/18 - 11/30/18 Monthly Telephone Service, 12/1/18 - 12/31/18	\$ 37,578.00	\$ \$	92,994.33 1,216.70

Vision Mai, LLC.	Legislative Consulting, 12/1/18 - 12/31/18	\$	6,750.00
Ward, Gail Workplace Solutions Zahn Governmental Solutions,	Reimburse, Meeting Travel Expense, 10/1/18 - 12/31/18 EAP Assistance Program, 12/1 - 12/31/18: Staff	\$ \$	23.00 300.44
LLC.	Legislative Consulting, 11/1/18 - 11/30/18	\$	5,000.00
PHYSICIANS, DISABILITY APPLICANTS			
Access Medical Evaluations	Eval & Report, H.Y. by Dr. Upadhyay	\$	800.00
		\$:	1,141,468.55

Adminstrative Expenses 1/1/19 - 1/31/19

VENDOR	DESCRIPTION	AMC	UNT		
AT&T	Monthly Phone Service, 11/19/18 - 12/18/18			\$	1,892.78
AT & T Mobility	Data Access, 11/25/18 - 12/24/18: Trustees			\$	217.00
ADP Screening & Selection	Background Check, New Employees			\$	111.19
Service	Background Check, New Employees			Ş	111.19
Advanced Resources	Temporary Staff, HR, 12/17/18 - 12/23/18	\$ 1,9	944.08		
	Temporary Staff, HR, 1/14/19 - 1/18/19	\$ 1,8	362.52	\$	3,806.60
American Express	Accom., Private Equity & Investment Summit, 11/27/18 - 11/29/18, New York, NY: Miller-May	\$	57.38		
	Credit, Accom., ILPA Conf., 11/5/18 - 11/7/18, New York,	\$ (3	320.35)		
	NY: Kelsen	,	,		
	Air, Callan Conf., 1/28/18 - 1/30/19, San Francisco, CA: Kelsen	\$ 2	207.97		
	Reg, 2019 NAPPA Seminar, 2/20/19 - 2/22/19. Tempe, AZ: Schomberg	\$ 5	555.00		
	Educational Training Material: Leadership Team & Administrative Services	\$ 1	106.50		
	Educational Training Material: Perez	\$	22.99		
	Credit, Educational Training Material	\$	(8.81)		
	Hubworks, Call Center Scheduling, 11/1/18 - 11/30/18: Member Services	\$	29.00		
	Trans., Private Equity & Investment Summit, 11/27/18 - 11/29/18, New York, NY: Miller-May	\$	62.21		
	Breakfast, Meeting with newly elected Trustees, 12/2/19: Burbridge	\$	47.70		
	Lunch, Meeting with President Blackwell, 12/3/19: Burbridge	\$	25.75		
	Trans., NAREIM Conference, 12/5/18, Chicago, IL: Miller-May	\$	8.25		
	American Express Card, Membership Dues, 1/1/19 - 12/31/19: Administration	\$	55.00		
	American Express Card, Membership Dues, 1/1/19 - 12/31/19: Burbridge	\$	55.00		
	American Express Card, Membership Dues, 1/1/19 - 12/31/19: White	\$	55.00		
	American Express Card, Membership Dues, 1/1/19 - 12/31/19: McCoy	\$	55.00		
	American Express Card, Membership Dues, 1/1/19 - 12/31/19: Shamley	\$	55.00		
	American Express Card, Membership Dues, 1/1/19 - 12/31/19: Cavallaro	\$	55.00		

1	American Express Card, Membership Dues, 1/1/19 - 12/31/19: Schroeder	\$	55.00		
	American Express Card, Membership Dues, 1/1/19 - 12/31/19: Miller-May	\$	55.00		
	American Express Card, Membership Dues, 1/1/19 - 12/31/19: Schomberg	\$	55.00		
	American Express Card, Membership Dues, 1/1/19 - 12/31/19: Ihejirika	\$	55.00		
	American Express Card, Membership Dues, 1/1/19 - 12/31/19: Vohra	\$	55.00		
	Membership Dues, Nappa, 1/1/19 - 12/31/19: Gonzales	\$	300.00		
	Membership Dues, Attorney Regulatory & Disciplinary Commission, 1/1/19 - 12/31/19: Gonzales	\$	393.47		
	Subscription Renewal, The Economist, 1/24/19 - 3/23/19: Burbridge	\$	42.00		
	Breakfast, Staff Appreciation, 12/20/18 Educational Training Material: Trustees	\$ \$	1,034.07 255.83		
	Amazon Consulting, ERS Website, 11/1/18 - 11/30/18	\$	1,114.53		
	Intelius, Member Locator Service, 12/1/18 - 12/31/18: Benefits	\$	139.65		
	Constant Contact, Payment Receipt, Email Links, 12/1/18 - 12/31/18	\$	373.53		
	Office Supplies	\$	307.08		
	Refreshments, Finance Committee Meeting, 12/6/18	\$	38.05		
	Lunch, Investment Manager's Meeting, 12/7/18	\$	420.05		
	Breakfast, Investment Manager's Meeting, 12/7/18	\$	25.22		
	Refreshments, Investment Manager's Meeting, 12/7/18	\$	6.01		
	Lunch, Trustee Meeting, 12/18/18 Breakfast, Trustee Meeting, 12/18/18	\$ \$	390.80 145.67	\$	6,384.55
Arhat	Digitizing of Microfilm & Microfiche, 12/16/18 - 1/15/19			\$	510.00
Chicago Messenger Service, Inc.	Delivery Service, thru 1/18/19			\$	185.74
Coffee Unlimited	Water Filtration System, 1/1/19 - 1/31/19			\$	164.75
Com Ed	Electric Service, 12/3/18 - 1/7/19: Suite 2650	\$	169.91	<u>۲</u>	020.62
Companyabia Is-	Electric Service, 12/3/18 - 1/6/19: Suite 2600	\$	750.72	Ş	920.63
Comgraphic, Inc.	Processing, Pension Checks & Advices, November 2018	\$	16,187.99		
	Processing, Pension Checks & Advices, December 2018	\$	16,014.61	\$	32,202.60
Concur Technologies, Inc.	Travel Expense Tracker, 1/1/19 - 1/31/19			\$	318.05

Cutting Edge Document	Shredding of Confidential Data, 1/8/19		\$	115.00
Digital Deployment, Inc.	Website Consulting Service, 1/1/19 - 1/31/19		\$	900.00
Direct Energy	Electric Service, 12/3/18 - 1/5/19: Suite 2600		\$	1,271.57
Directv	Satellite Reception, 12/10/18 - 1/9/19: Trustees		\$	7.00
Gabriel, Roeder, Smith & Company	Actuarial Services, 12/1/18 - 12/31/18		\$	7,100.00
Garvey's Office Products	Office Supplies		\$	1,650.35
Goldstine, Skrodzki, Russian, Nemec & Hoff, Ltd.	Legal Services, Return to Hearing, 11/1/18 - 11/30/18		\$	700.00
Government Finance Officers Assoc.	Filling Fee, FY2018, CAFR		\$	1,095.00
Holleman, Michelle	Monthly Consulting, 12/1/18 - 12/31/18		\$	8,820.00
Hurtado, Daniel	Reg., 2019 NAPPA Seminar, 2/20/19 - 2/22/19, Tempe, AZ	\$ 485.00		
	Membership Dues, Attorney Regulatory & Disciplinary		۲.	070.00
	Commission, 1/1/19 - 12/31/19	\$ 385.00	\$	870.00
Ice Miller, LLP.	Legal, Litigation, 11/1/18 - 11/30/18	\$ 332.50		
	Legal, Tax, 11/1/18 - 11/30/18	\$ 2,805.00		
	Legal, Tax, 12/1/18 - 12/31/18	\$ 5,000.00	\$	8,137.50
Interpark	Parking Passes		\$	900.00
Intl Business Machines Corp.	Data Vault Backup Service, 12/1/18 - 12/31/18		\$	2,387.07
Iron Mountain	Computer Daily Backup Storage Charges, 12/1/18 - 12/31/18		\$	783.00
Jacobs, Burns, Orlove & Hernandez	Legal, Litigation, 10/1/18 - 10/31/18	\$ 40,605.49		
	Legal, General, 10/1/18 - 10/31/18	\$ 35,606.45	\$	76,211.94
LexisNexis	Member Information Search, 12/1/18 - 12/31/18	,,	\$	330.63
Logmen USA, Inc.	CTPF Webinars, 1/2/19 - 2/1/19		\$	517.20
Microsystems, Inc.	Annual Storage Charges, 1/1/19 - 12/31/19		\$	2,357.10
Midco, Inc.	Security Maintenance, 11/1/18 - 10/31/19		\$	7,489.05
North Shore Printers, Inc.	Retirement Post Cards		\$	2,293.00
Partners By Design	Professional Design Services, 12/1/18 - 12/31/18		\$	1,789.53
Pension Benefit Information	Death Audit Services		\$	7,953.00
Plante Moran, PLLC.	Professional Services, Trustee Training on ERM, 12/18/18		\$	9,800.00
Sentinel Technologies, Inc.	Smartnet Services, 11/15/18 - 10/24/19	\$ 1,618.00		
	Managed Service Agreement, 1/1/19 - 1/31/19	\$ 2,186.80	Ś	3,804.80
SHI International Corp.	Apple iPads	\$ 5,136.00	Y	5,554.50
	Host Software, VMware & VSphere, 12/14/18 - 12/13/19	\$ 28,498.00		
	Maintenance, VMware & VSphere, 12/14/18 - 12/13/19	\$ 14,216.00	\$	47,850.00
i .	Consulting Service, Finance, 1/7/19 & 1/11/19		•	,

Staff Salary - CTPF	Office Salary for January 2019		\$ 630,055.45
Sun Life Assurance Company of Canada	Life Insurance, 1/1/19 - 1/31/19: Staff		\$ 4,282.06
U.S. Postmaster	Postage, Retirement Seminars, 2/18/19 & 4/16/19		\$ 2,047.58
Unishippers	Delivery Service thru 1/23/19		\$ 56.43
USPO Chicago 1, LLC.	Rent, 1/1/19 - 1/31/19	\$ 56,345.17	
	Operating Expenses, 1/1/19 - 1/31/19	\$ 36,035.00	
	Tenant Services, 11/17/18 - 12/13/18	\$ 195.00	
	Water Deposit, Suite 2600	\$ 638.00	\$ 93,213.17
Vision Mai, LLC.	Legislative Consulting, 1/1/19 - 1/31/19		\$ 6,750.00
Workplace Solutions	EAP Assistance Program, 1/1/19 - 1/31/19: Staff		\$ 300.44
Zahn Governmental Solutions, LLC.			\$ 5,000.00
PHYSICIANS, DISABILITY APPLICANTS			
RECORD COPY SERVICES	Medical Records, S.V. by Dr. Bitar	\$ 79.75	
	Medical Records, T.W. by Dr. Mihailescu	\$ 155.75	
	Medical Records, A.B. by Dr. Micco	\$ 29.75	
	Medical Records, D.D. by Dr. Kudirka	\$ 448.75	
	Medical Records, D.D. by Dr. Nacke	\$ 289.25	
	Medical Records, D.D. by Dr. Katz	\$ 186.50	
	Medical Records, D.D. by Dr. Garcini	\$ 99.75	
	Medical Records, T. J. by Dr. James	\$ 137.75	\$ 1,427.25
	•		_
			\$ 985,201.01

PUBLIC SCHOOL TEACHERS' PENSION AND RETIREMENT FUND OF CHICAGO

STATEMENT OF PLAN POSITIONS

STATEMENT OF PLAN POSITIONS	Prelim	Final		
	12/31/2018	6/30/2018		
ASSETS				
Cash and cash equivalents	394,587,407	580,897,074		
outh and outh oquivalence	001,001,101	000,001,011		
Prepaids	129,245	90,787		
	129,245	90,787		
Receivables:				
CPS Required Contribution	548,344,540	289,191,260		
CPS Normal Cost from State of Illinois	151,188,000	18,441,667		
State of Illinois Additional Contribution	-	11,692,000		
Employee	9,893,302	9,304,638		
Interest on required contributions	-	-		
Accrued investment income	35,893,921	37,521,126		
Participating teachers' accounts				
for contributions	4,617,527	4,636,522		
Other receivables	2,413,539	10,315,826		
	752,350,829	381,103,039		
Lance described and followed by				
Investments, at fair value:	F 000 000 F0F	0.445.000.404		
Equity	5,608,992,565	6,445,200,104		
Public REITs	132,694,932	144,771,014		
Bonds	2,414,712,507	2,418,220,605		
Infrastructure Real Estate	237,229,408 725,137,444	227,364,041 746,521,607		
Private Equity	338,703,886	300,228,413		
Fillvate Equity	9,457,470,742	10,282,305,784		
	3,437,470,742	10,202,303,704		
Securities lending collateral				
received from borrowers	638,131,695	947,417,427		
F: 1	4 400 500	4 400 500		
Fixed assets	1,190,580	1,190,580		
TOTAL ASSETS	11,243,860,498	12,193,004,691		
LIABILITIES				
Securities lending collateral				
payable	637,010,512	946,404,347		
payable	007,010,012	040,404,047		
Employer required contribution				
payable	-	10,449,000		
· ·				
Administrative/accounts payable	111,739,033	131,385,830		
TOTAL LIABILITIES	748,749,545	1,088,239,177		
Nick was the management of the Control of the Contr	40 405 440 050	44 404 705 511		
Net positions available for benefits	10,495,110,953	11,104,765,514		

PUBLIC SCHOOL TEACHERS' PENSION AND RETIREMENT FUND OF CHICAGO

STATEMENT OF CHANGE IN PLAN POSITIONS	INTERIM		
	Prelim 6 Months Ended 12/31/2018	12 Months Ended 6/30/2018	
ADDITIONS:			
Employer			
State of Illinois	12,087,000	11,692,000	
Employer data/cash	131,471	309,835	
CPS Required Contribution	569,701,000	551,410,000	
CPS Normal Cost from State of Illinois	226,782,000	221,300,000	
	808,701,471	784,711,835	
Employee	78,972,227	183,369,370	
Income from investment activities			
Interest	39,786,642	86,397,678	
Dividends	84,711,650	182,949,696	
Realized gains (losses)	86,620,311	610,127,808	
Unrealized gains (losses)	(896,019,977)	50,450,654	
Miscellaneous investment income	663,071	1,081,966	
Gross income from investment activities:	(684,238,303)	931,007,802	
Income from securities lending activities:			
Securities lending income	2,032,683	4,500,198	
Gross income from securities lending activities:	2,032,683	4,500,198	
Interest received on late contribution payments	1,449,709	1,123,915	
Miscellaneous income	21,467	351,361	
TOTAL ADDITIONS	206,939,254	1,905,064,481	
DEDUCTIONS:			
Refunds	7,022,496	25,065,398	
Pension benefits	725,745,661	1,437,264,031	
Death benefits	1,257,738	3,951,010	
Health insurance	41,189,118	66,333,655	
Investment advisory & custodial	22,340,794	38,803,455	
Administrative & miscellaneous	7,631,563	15,067,745	
Employer data/cash	2,445	_	
Prior Period Adjustments	-	6,987,600	
Accounts Uncollectible	11,404,000	-	
TOTAL DEDUCTIONS	816,593,815	1,593,472,894	
NET INCREASE (DECREASE)	(609,654,561)	311,591,587	
Net assets available for benefits			
at beginning of year	11,104,765,514	10,793,173,927	
Net positions available for benefits at end of period	10,495,110,953	11,104,765,514	

PUBLIC SCHOOL TEACHERS' PENSION AND RETIREMENT FUND OF CHICAGO

Administrative Budget to Actual Expense

	FY 2019			FY 2018			FY 2017		
	Prelim		% of			% of	Year		% of
	6 Months Ended	Budget	Budget	Year Ended	Budget	Actual to	Ended	Budget	Actual to
Category	12/31/2018	FY 2019	To Date	6/30/2018	FY 2018	Budget	6/30/2017	FY 2017	Budget
Capital	\$ -	42,000.00	0%	\$ -	7,600.00	0%	-	-	0%
Disaster Recovery	34,515	407,000	8%	64,540	343,100	19%	57,467	172,000	33%
Education and Training	58,390	344,830	17%	206,312	305,301	68%	166,479	270,305	62%
Equipment	164,276	1,136,890	14%	247,307	750,210	33%	414,269	529,175	78%
Membership Dues & Subscriptions	16,929	41,580	41%	35,617	32,709	109%	36,314	32,159	113%
Miscellaneous	5,729	46,270	12%	31,927	39,400	81%	11,691	31,620	37%
Personnel	5,184,425	11,833,500	44%	9,800,127	10,841,428	90%	8,717,635	9,525,124	92%
Professional Services	23,786,688	48,259,130	49%	42,030,632	42,776,286	98%	39,849,434	38,484,209	104%
Property	557,220	1,155,000	48%	1,100,830	1,100,000	100%	1,061,905	1,090,000	97%
Supplemental	98,014	148,500	66%	18,825	144,600	13%	95,228	144,600	66%
Supplies	28,946	81,080	36%	83,752	130,300	64%	87,932	126,774	69%
Utilities	37,225	80,850	46%	67,196	76,990	87%	69,388	76,900	90%
Total	29,972,357 *	63,576,630	47%	53,687,065 *	56,547,924	95%	50,567,743 *	50,482,866	100%

^{*}The administrative expense totals displayed in this table do not include fixed asset depreciation, which is calculated at year-end, or any applicable prior period adjustments. As a result, the totals will not tie to the administrative expenses displayed in the CAFR.